SulTRAC

September 6, 2013

Ms. Shari Kolak
Work Assignment Manager
U.S. Environmental Protection Agency (EPA)
77 W. Jackson Blvd.
Chicago, IL 60604

**Subject:** **Phase II Investigation Summary Technical Memorandum**
**East Troy Contaminated Aquifer (ETCA) Site**
**Remedial Investigation/Feasibility Study (RI/FS); Troy, Ohio**
**Work Assignment No. 145-RICO-B5EN**

Dear Ms. Kolak:

SulTRAC is submitting the enclosed Phase II Investigation Summary (Technical Memorandum) for your review. The technical memorandum provides a summary of field investigation activities and results from Phase II of the remedial investigation (RI) at the East Troy contaminated aquifer (ETCA) site in Troy, Ohio.

If you have any questions regarding this submittal, please call me at (513) 333-3669.

Sincerely,

Guy D. Montfort

Guy Montfort
SulTRAC Project Manager

Enclosure

cc: Parveen Vij, EPA Contracting Officer (letter only)
Melinda Gould, SulTRAC Program Manager (letter only)
File

1 S. Wacker Drive, 37th Floor, Chicago, IL 60606
Tel 312.201.7700 Fax 312.201.0031

**Enclosure**

**Phase II Investigation Summary Technical Memorandum**
**East Troy Contaminated Aquifer (ETCA) Site**
**Remedial Investigation/Feasibility Study (RI/FS)**
**Troy, Ohio**

**Phase II Investigation Summary Technical Memorandum**
**East Troy Contaminated Aquifer (ETCA) Site**
**Remedial Investigation/Feasibility Study (RI/FS)**
**Troy, Ohio**

This technical memorandum provides a summary of field investigation activities and results from the remedial investigation (RI) at the East Troy contaminated aquifer (ETCA) Site in Troy, Ohio, through completion of Phase II of the RI, with an emphasis on the data collected during Phase II. The data gaps identified in this document are based on interpretation of the results of field sampling efforts during Phase II of the RI, which was completed in the summer of 2013. Any proposed Phase III activities and sampling locations will be designed to address remaining data gaps with regard to the remedial action objectives of the RI specified in SulTRAC's approved site-specific sampling and analysis plan (SAP) dated August 2010 and the SAP addendum dated December 2011.

The results of Phase I of the RI, data gaps, and data needs for the Phase II investigations were presented in the Phase I Investigation Summary and Proposed Phase II Investigation Scoping Technical Memorandum (Phase I technical memorandum) (SulTRAC 2013). Detailed information regarding field and analytical procedures used for Phase II can be found in the SAP (SulTRAC 2010) and SAP addendum (SulTRAC 2011). Detailed descriptions and analysis of all sampling results will be presented in the RI report to be prepared after all Phase III RI activities have been completed. This Phase II RI summary provides brief descriptions of the site background (Section 1.0); Phase II data collection activities completed (Section 2.0); a summary of key findings based on overall assessment of the data resulting from all activities (Section 3.0); and a summary of data gaps remaining with regard to project objectives (Section 4.0). Figures summarizing the completed sampling locations and tables summarizing the Phase II analytical data are presented after the text.

## 1.0 BACKGROUND

The ETCA Site is located in Troy, Miami County, Ohio (see Figure 1). The site encompasses areas on the east and west sides of the Great Miami River (GMR), which flows from northwest to southeast in the immediate study area. The site consists of groundwater contamination, primarily tetracholoroethene (PCE), trichloroethene (TCE) and cis-1,2-dichloroethene (cDCE), in a sand and gravel aquifer. Groundwater flow in this aquifer is generally also toward the southeast, but is locally influenced by pumping in the City of Troy's east municipal supply wellfield located within the site, on the east side of the GMR.

The site includes two general areas of groundwater contamination lying west of the GMR that are believed to originate from separate, multiple sources. One area of contamination, referred to as the "Residential Area PCE Plume," originates in the vicinity of East Main and Walnut Streets. It extends southeastward beneath a primarily residential area and consists of PCE with lesser amounts of TCE in some locations. The second area of contamination, referred to as the "Water Street Plume," extends from the vicinity of the former Hobart Brothers Cabinet (Hobart) property on East Water Street, southeastward beneath a mixed industrial, residential, and institutional use area. PCE, TCE, and cDCE are typically detected in groundwater in this area. The specific compounds and relative amounts of each vary spatially and in some cases temporally at individual locations. During Phase I of the RI, soil and groundwater contamination was detected and indicated the presence of a source area on the Hobart property. Adjacent to and downgradient from the Hobart facility there is a second industrial facility, Spinnaker Coatings LLC (Spinnaker), where chlorinated volatile organic compound (VOC) contamination was also confirmed to be present in both soil and groundwater during Phase I. The relationship between the contamination on the two properties and along Water Street is being investigated as part of the RI.

The site also includes groundwater contamination on the east side of the GMR. cDCE has been detected in several municipal water supply wells in the City of Troy's East Wellfield. This wellfield includes five production wells: P-14, P-18, P-4, P-17, and P-13. Typically, cDCE is detected only in samples from well P-18, but prior to 2007 was occasionally detected in well P-14 and more recently has been sporadically detected in well P-17. The concentrations detected have been below the U.S. Environmental Protection Agency (EPA) Maximum Contaminant Levels (MCLs) established under the Safe Drinking Water Act. Pumping from the wellfield appears to affect groundwater flow patterns in the deep portions of the aquifer on both sides of the GMR.

VOCs have also been detected in and around the City of Troy's West Wellfield, which lies approximately 1 mile upgradient (northwest) from the ETCA Site. Current information appears to indicate that the sources of contamination at the ETCA site are separate and different from those that affected the West Wellfield; thus, the West Wellfield is not considered part of the ETCA Site.

Investigations of VOC contamination in various media by Ohio EPA, EPA, and private entities have been ongoing since the 1990s and confirmed the presence of groundwater and soil contamination and vapor intrusion (VI) concerns the ETCA site. EPA initiated the RI at the ETCA site in 2009. The objectives of the RI focus on identifying the sources as well as the nature and extent of contamination. The RI is being completed in multiple phases. Phase I was completed in 2012. Phase II was completed in the summer of 2013. Additional investigation will likely be conducted as Phase III in the summer and fall of 2013.

Additional detailed information regarding the site history, project objectives, and methods of the investigation are presented in the SAP (SulTRAC 2010) and SAP addendum (SulTRAC 2011). Detailed information regarding the scope and results of Phase I RI activities are presented in the Phase I technical memorandum (SulTRAC 2013).

## 2.0 SUMMARY OF PHASE II ACTIVITIES

Scoping-related activities for Phase II of the RI for the ETCA site were conducted as Phase I data became available during 2012. The proposed scope of Phase II investigations was documented in the Phase I technical memorandum (SulTRAC 2013). Figure 2 indicates the locations of all Phase II soil and groundwater sampling points.

Phase II of the RI included ongoing review of Kimberly Clark's (KC) quarterly monitoring data. Phase II field investigations commenced in August 2012, with a second round (summer seasonal) of VI sampling at locations initially sampled in January 2012 during Phase I. A preliminary boring program with collection of groundwater samples was completed in December 2012. In January of 2013, a round of deep groundwater level measurements was collected, followed by a drilling, vertical aquifer sampling (VAS), and monitoring well installation program. In February 2013, a soil boring and sampling program, which also included additional groundwater sampling, was completed. A comprehensive groundwater sampling event was completed in March 2013 that included all Ohio EPA, City of Troy, and newly installed Phase I and Phase II RI monitoring wells, as well as several wells on the Spinnaker site and Miami Conservancy District (MCD) piezometers located adjacent to the GMR. VI monitoring of additional locations, selected based on ongoing review of data from Phase II activities, was completed in May 2013. Research on potential source areas, including review of historical property use information, was conducted on an ongoing basis throughout Phase II as sampling data became available. A site visit with inspections of each of the contaminant source areas identified during Phase I and Phase II was conducted in July 2013. Each of these activities is described below in chronological order.

Detailed information regarding the project data quality objectives and methods employed during the investigation is presented in the SAP (2010) and SAP addendum (2011).

**A. Quarterly Sample Data from KC – June 2012 through March 2013**

KC conducts quarterly monitoring of wells on the west side of the Spinnaker plant site. The samples are analyzed for VOCs, and KC provides these data to EPA. The KC samples are analyzed by a regional laboratory (TestAmerica). EPA reviews these data to supplement the ongoing RI data collection but does not conduct detailed analysis of the results. During Phase II, quarterly data for groundwater sampling events completed in June, September, and December 2012 and March 2013 were received and reviewed.

**B. Phase II Vapor Intrusion Sampling – Resampling of Phase I Locations, August 2012**

During Phase I, 18 locations were sampled for VI in February 2012. Sixteen homes and two commercial business locations were tested for indoor air VOCs and sub-slab vapor VOCs (if they had a basement with a slab) following Ohio EPA and EPA guidance. Current guidance recommends multiple seasonal sampling events to account for potential variability in concentrations caused by use of heating, ventilation, and air conditioning (HVAC) systems and windows at different times of year. For this reason, EPA requested Phase II access to each of the Phase I locations for a second round of sampling. Ultimately, 15 locations authorized access for the summer resampling in August 2012. All air samples were analyzed for VOCs using Method TO-15 by Air Toxics, a subcontracted laboratory.

**C. Geoprobe Groundwater Screening Samples, December 2012**

Based on the results of Phase I and discussions with EPA regarding the scope of the Phase II hydrogeologic investigation, it was determined that additional screening data were needed to optimize placement of permanent monitoring wells for the objective of confirming the boundaries of the Residential Area PCE plume. These data were further needed to confirm the proposed locations for VI monitoring. EPA completed 14 borings to the top of the water table using a direct-push rig at locations on Walnut, East Franklin, East Canal, Mulberry, Crawford, Counts, Frank, Williams, and East Main Streets and in the area between East Main Street and the GMR. EPA collected screening-level groundwater samples to estimate plume boundaries and support decisions regarding Phase II monitoring well placement. Groundwater samples were analyzed for VOCs by a regional laboratory (TestAmerica).

**D. Measurement of Piezometric Elevations – Deep Aquifer Zone – January 2013**

Review of the Phase I groundwater data indicated that the shallow groundwater plume extended to the area above the portion of the deep aquifer zone within the area of pumping influence from the East Wellfield. Review of Phase I piezometric data indicated that Troy well P-18, where cDCE is routinely detected, was not pumping at the time groundwater elevations were measured for either of the two Phase I sampling events. For this reason, EPA collected an additional round of piezometric elevation data from the deep monitoring wells and Troy East Wellfield production wells in January 2013 to evaluate groundwater flow patterns with well P-18 operating. EPA used these data in selecting locations for additional monitoring wells and vertical aquifer sampling (VAS) locations during Phase II. Groundwater elevations in all of the available "deep" monitoring wells were measured, with the exception of well MW-EPA-112D, as ice above and inside of the well vault prevented access to the inner well casing.

## E. Vertical Aquifer Sampling and Monitoring Well Installation, January 2013

A drilling program consisting of a series of shallow and deep borings installed using Rotosonic drilling techniques was conducted in January 2013. The program was conducted to supplement the Phase I monitoring well network by providing additional permanent monitoring wells in areas where Phase I data and the December 2012 Geoprobe sampling indicated that that additional data were needed regarding the vertical and horizontal extent of contamination, as well as to identify contaminant source areas and migration pathways. A total of six additional shallow wells and two "intermediate" depth wells were installed in the residential plume area west of the GMR. One deep monitoring well (MW-EPA-123D) was installed directly upgradient from the East Wellfield on the east side of the GMR to confirm that contamination detected to date in the East Wellfield was not migrating from the West Wellfield plume area through the deep zone. VAS (groundwater) samples were also collected from this boring (VAS-208), and two additional VAS borings (VAS 209 and 210) were located in the area between the GMR and the East Wellfield, near production wells P-14 and P-18. Monitoring wells were not installed at these locations because of their proximity to the production wells. Samples from VAS borings were analyzed at a local laboratory as screening samples. VAS results were used to evaluate the vertical distribution of groundwater contamination within the sand and gravel aquifer and to determine the depth and location where contamination is entering the wellfield area. An elevation survey tying all existing and new monitoring wells to a common datum was also completed.

## F. Comprehensive Groundwater Sampling, February-March 2013

A Phase II groundwater sampling event was conducted that included all 28 RI Phase I and Phase II monitoring wells and 23 existing wells installed by other entities. Samples were analyzed through the EPA Contract Laboratory Program (CLP) for VOCs. The sampling event included a total of 51 wells consisting of all existing Ohio EPA and City of Troy monitoring wells (except well OEPA-5 because this data point has been replaced by wells farther downgradient), three KC wells at the Spinnaker East and West End areas, two MCD piezometers, and the 28 wells installed during Phases I and II of the RI. Groundwater elevation data were collected at all of the monitoring wells and the six City of Troy East Wellfield production wells. Production wells P-18 and P-13 were operating at the time the depth to water was measured and groundwater samples were collected from the monitoring wells.

## G. Soil Sampling and Shallow Groundwater Screening Samples, February 2013

The primary objectives of this program were to provide data regarding the potential sources and the extent of soil contamination in the source areas and "hot spots." In addition, based on screening groundwater sample data from December 2012 and January 2013, several additional shallow borings were completed to allow collection of screening groundwater data to supplement data from the monitoring well network with regard to the boundaries of the shallow Residential Area PCE plume. Twenty-seven borings were completed using a Geoprobe sampler. Soil samples were collected at locations in proximity to suspected source areas and analyzed for VOCs by SW-846 Method 5035. Several surficial soil samples were collected from residential yards in the area between the Hobart and Spinnaker sites to support the human health risk assessment. Groundwater samples were collected from some borings and analyzed for VOCs. Only groundwater screening samples were collected at several borings completed around the boundaries of the plume areas to supplement the data from the monitoring well network regarding plume boundaries and source locations. KC representatives collected split samples of all soil and groundwater samples collected on the Spinnaker and Hobart properties.

### H. Additional Phase II Vapor Intrusion Sampling, April 2013

EPA requested access for sampling at 105 locations deemed "priority" locations for VI monitoring based on all available data (pre-RI data, RI Phase I data, and Phase II data collected by January 2013). Based on those locations where the owners agreed and additional locations where owners offered access during public meetings, a total of eight residential and two non-residential commercial locations were ultimately sampled. Samples were collected for analysis of indoor air VOCs and sub-slab vapor VOCs if buildings had a basement with a slab, following Ohio EPA and EPA guidance. All air samples were analyzed for VOCs using Method TO-15 by Air Toxics, a subcontracted laboratory.

### I. Source Area Site Visits – July 2013

EPA, Ohio EPA, and SulTRAC conducted site visits at various locations in the groundwater contaminant source areas on July 2 and 3, 2013. Site visits, including inspection of the interior and exterior areas of structures, were conducted at the following areas: the First Presbyterian Church addition at Walnut and Main Streets and the nearest downgradient structure at 102 East Main Street; a former Waltz Dry Cleaners location at Union and Main Streets; the Hobart facility, and the Spinnaker facility's western plant addition. The purpose of the site visits was to obtain more detailed information regarding potential sources and contaminant migration pathways. No intrusive sampling activities were conducted.

## 3.0 SUMMARY OF KEY OBSERVATIONS FROM EVALUATION OF PHASE II DATA

The following section summarizes key observations resulting from Phase II data regarding the sources, nature, and extent of contamination. Where applicable, discussions are centered around the data gaps identified in the Phase I technical memorandum (SulTRAC 2013). Figures showing sampling results and tables showing analytical results for Phase II RI samples are presented after the text.

### A. Site Geology and Hydrogeology

Site geologic conditions observed during Phase I and Phase II of the RI indicated a highly variable and complex subsurface in the site area. Figure 3 shows the locations of cross sections depicting the subsurface conditions observed, which are presented in Figures 4through 8.

Subsurface materials encountered generally consisted of sand and gravel with interbedded, laterally discontinuous clay and silt layers of variable thickness and occurring at varying depths. In general, west of the GMR, clay layers of significant thickness were encountered more frequently in the area between East Main Street and the GMR (with the exception of location MW-EPA-112D), whereas clays appear to be generally thinner or absent at locations south of East Main Street. Clays were encountered at most locations on the east side of the GMR.

The groundwater elevation data collected during the Phase II groundwater sampling event are presented in Table 1. Figures 9 and 10 present the apparent groundwater flow contours for the Phase II sampling event for the shallow and deep aquifer zones. (Municipal wells P-18 and P-13 were operating during the sampling event when groundwater elevations were measured.)

- Groundwater flow in the ***shallow*** zone has appeared relatively consistent over time in the area south of East Main Street and is generally southeastward, roughly parallel to the Great Miami River.

- Groundwater flow in the ***shallow*** zone in the area east of Oak Street and north of East Main Street appears to have a component of flow in the direction of the GMR and the East Wellfield pumping centers, suggesting that pumping in the deep portion of the aquifer east of the river may influence flow in the shallow zone west of the river.

- The Phase II data for the ***shallow*** aquifer in the area between East Water Street and the GMR appear to indicate flow partially toward, and in the downstream direction of the GMR. Comparison of Phase I and Phase II data suggests that varying water levels in the GMR and adjacent portions of the aquifer result in variable flow patterns in this area.

- The groundwater flow direction in the ***deep*** aquifer zone in the area west of Oak Street appears to be southeastward, parallel to the GMR.

- The flow in the ***deep*** portion of the aquifer in the area east of Oak Street becomes increasingly influenced by pumping in the East Wellfield, with the flow contours wrapping inward toward the wellfield.

- Groundwater flow in the ***intermediate/50-foot*** zone, west of Crawford Street, appears to be southeast, parallel to the GMR, and consistent with the flow patterns in the shallow aquifer in this area.

- Piezometric head differences measured between the shallow, intermediate, and deep zones west of the GMR (see Table 2) indicate potential vertical gradients that vary in both direction and magnitude across the site, ranging from upward, to neutral, to downward. The direction generally remained consistent although the magnitude varied over time at locations where data were available for both the Phase I and Phase II events. The maximum downward gradient was observed at shallow/deep well locations MW-EPA-118S/ Troy MW-P at the intersection of East Main and Williams Street during Phase II. The maximum upward gradient was measured at shallow /deep well pair OEPA-3/MW-EPA-112D on the Spinnaker property during Phase II.

- As noted in the discussion of site geology, clay layers of significant thickness were observed between the upper and lower aquifer zones at some locations. Therefore the differences in vertical head observed among zones may simply reflect locally limited hydraulic communication between zones, rather than actual downward or upward flow. However, the flow contours in the shallow zone in the area east of Union Street and north of East Main Street appear to indicate a component of flow toward the river or East Wellfield. These contours may indicate that pumping in the deep zone east of the GMR influences flow in the shallow aquifer in some areas west of the river.

- East of the GMR, differences in piezometric head measured between the shallow and deep zones indicated downward vertical gradients at the Troy MW-L/M and MW-EPA-105S/D well clusters.

**B. Extent of Groundwater Contamination**

The following section discusses the horizontal and vertical extent of groundwater contamination based on the Phase I and Phase II data, with consideration of the Spinnaker quarterly monitoring data where applicable.

***Residential Area PCE Plume***

Figures 11 and 12 present Phase II groundwater data for the shallow and the intermediate/deep zones. Tables 3 and 4 summarize the groundwater data used to support the following discussions. The following observations were noted:

- The Phase II investigations indicated that the horizontal extent of contamination in the upper aquifer zone extends farther southeast than the Phase I data indicated.

- The shallow contamination appears to be bounded by East Main Street on the north in the vicinity of the original suspected source at East Main and Walnut Streets. Screening data collected from Geoprobe borings on the west side of Walnut Street indicated a relatively narrow plume emitting from the area beneath the present-day Presbyterian Church addition, flowing southeastward. The southern boundary of the plume in this area appears to lie between monitoring well OEPA-11 and East Franklin Street. Relatively high concentrations of PCE – similar to those detected in the suspected source area — were detected in a screening-level groundwater sample collected on South Mulberry Street adjacent to the exit from the police station parking area; whereas a groundwater sample collected during Phase I indicated lower concentrations of PCE at the corner of Mulberry and East Main Streets. These data, combined with screening data collected on the north side of East Main Street, suggest that the axis (more concentrated portion) of the plume trends gradually (southeastward) away from East Main Street as it moves downgradient.

- The downgradient/lateral boundary of the plume in the Franklin Street area was confirmed to lie in the area between Williams and East Main Streets, consistent with screening-level data collected during Phase I. PCE, TCE, or cDCE were not detected in groundwater samples collected from monitoring well MW-EPA-115S at the intersection of East Franklin and East Main Streets. In addition, a screening groundwater sample collected from a Geoprobe boring on East Main Street approximately 300 feet east of MW-EPA-115S was also "nondetect" for PCE, TCE, and cDCE.

- The southern lateral boundary of the residential area plume in the area between Mulberry and Union Streets appears to be in the area between East Franklin and East Canal Streets. The axis of the plume – which includes the area with relatively high concentrations of PCE in groundwater – appears to be limited to a relatively narrow corridor centered just north of East Franklin Street with its northern boundary between East Franklin and East Main Streets.

- Phase II data collected from monitoring wells and Geoprobe borings indicate that the axis of the residential area PCE plume in the area southeast of Union Street trends south of East Franklin Street, with the highest concentrations present in the area between East Franklin and East Canal Streets. The maximum downgradient extent of the Residential Area PCE plume in this area appears to lie near East Canal Street, in the vicinity of Floral Avenue. A screening groundwater sample collected from a Geoprobe boring located along Floral Avenue (FLO-1) on the apparent plume axis (based on groundwater flow direction) contained PCE at a low concentration (2 micrograms per liter [µg/L]), below the applicable screening level of 5 µg/L. The southern lateral boundary of the plume in this area appears to lie between East Canal and Scott Streets based on data from three Geoprobe borings (FRA-1, MOR-1 and FLO-2). VOCs were not detected in these three samples.

- Groundwater samples from borings and monitoring wells located in the vicinity of East Main and Williams Streets did not contain detectable concentrations of VOCs, indicating that the Residential Area PCE plume does not extend into that area.

- Data collected from borings and monitoring wells located on Crawford Street, Union Street, and the intervening area indicated that PCE contamination detected at monitoring well MW-EPA-103S may represent a second PCE plume originating from another source at the intersection of East Main and Union Streets. This plume appears to move eastward through the area north of East Main Street and east of Union Street. This plume appears to extend eastward to the GMR in the area between the northern termini of Counts and Williams Streets and may co-mingle with the Water Street area plumes in this area. The maximum eastern/downgradient limit of this plume appears to be located between the MCD T-13/14 piezometers and Phase II boring location BW-013 approximately 600 feet southeast of MCD-T-13/14. Screening data from a groundwater sample collected at this boring in December 2012 did not indicate the presence of PCE.

- The highest concentrations of PCE were detected at monitoring wells OEPA-7 and OEPA-6, with PCE concentrations approximately 3 times higher than those detected in the shallow zone in the original source area at Walnut and Main Streets. These wells are located near the intersections of Clay and Crawford Streets with East Franklin, two and three blocks downgradient from the original source area. Phase I and Phase II investigations did not find other likely primary sources of contamination in this area. The plume appears to be relatively narrow in this area, as indicated by data from Phase II borings BW-006 and BW-007 and monitoring well EPA-102S, installed along Crawford Street, and all of which appear to be on or just outside the lateral edges of the plume. High contaminant concentrations at locations downgradient from the original source area suggest the possibility of residual PCE (from an old release that migrated from the original source area) back-diffusing from fine-grained materials into the sand and gravel aquifer.

- Table 2 includes a comparison of PCE, TCE and cDCE concentrations detected in groundwater at locations where multiple depth horizons are monitored. The vertical extent of contamination in the vicinity of the original source area appears to include PCE contamination in the shallow zone associated with the range of fluctuation in the water table (approximately 16 to 20 feet below ground surface [bgs]); and a deeper "intermediate" zone lying at approximately 50 feet bgs that contains both PCE and lower concentrations of TCE. Overall, the highest contaminant concentrations encountered to date at the ETCA site have been detected in monitoring well 107I, screened within this "intermediate" depth zone.

- Contamination at the 50-foot level was also encountered in well MW-EPA-119I near the intersection of Clay and East Franklin Streets, but was not detected at intermediate well MW-EPA-104I, located north of East Main Street between Clay and Crawford Streets. For these reasons, the lateral extent of the highly contaminated "intermediate" zone appears to be limited to a relatively narrow area between the original source at Walnut and Main Streets and the vicinity of Clay Street.

- VOCs were not detected in the deep zone (monitoring wells screened at depths greater than 70 feet bgs) during the Phase II investigation. These data suggest that vertical migration of significant concentrations of VOCs to the deep aquifer zone is not currently occurring in the Residential Area PCE plume and that chlorinated VOCs are migrating to the deep part of the aquifer in the area closer to the wellfield and the GMR.

***Water Street Area***

The following sections discuss observations regarding the groundwater contamination in the Water Street Area. Figures 11 and 12 present Phase II groundwater data for the shallow and the intermediate and deep zones. Tables 2, 3 and 4 summarize all Phase II groundwater data.

- In general, groundwater contaminant concentrations detected in samples from shallow monitoring wells during the Phase II sampling event were lower and groundwater elevations were higher than those observed during the Phase I baseline or comprehensive events, suggesting that variations in groundwater levels may affect groundwater concentrations on a temporal basis.

- PCE and TCE were detected in groundwater samples collected from shallow monitoring wells located on, adjacent to, and directly downgradient from the Hobart property.

- Samples from Phase II shallow groundwater monitoring well MW-EPA-122S, installed on the northern terminus of Clay Street, directly upgradient from the Hobart facility loading dock area, did not contain detectable concentrations of VOCs. This observation, and data from monitoring well OEPA-13, are consistent with Phase I data that indicate a groundwater contaminant plume originates on the Hobart property.

- TCE and cDCE were detected in shallow groundwater samples from borings and monitoring wells in areas farther downgradient along Water Street; areas on the Spinnaker site and adjacent areas on the GMR levee. The highest concentration of VOCs detected was TCE at 39 µg/L, collected in a screening sample from a soil boring between the north side of the Spinnaker western plant building and the levee of the GMR. The location of this sample was in the same general area where Ohio EPA also detected TCE and cDCE in shallow groundwater samples collected using a Geoprobe in 2007. The concentration of TCE was higher than is typically reported in any of the adjacent shallow monitoring wells during Spinnaker's quarterly monitoring events and higher than those observed in Phase I or Phase II groundwater samples collected by EPA at nearby well OEPA-3.

- On the Spinnaker site, VOCs were not detected in a groundwater sample from Spinnaker shallow monitoring well KMW-10. VOCs were also not detected in a split sample collected by KC from this well. These results are inconsistent with KC quarterly data from this well, which typically indicate the presence of cDCE at concentrations as high as 120 µg/L. Quarterly samples collected by KC from this well in March and June 2013 reportedly contained cDCE, but at lower concentrations than observed in past sampling events.

- PCE was detected in a groundwater screening sample collected from Phase II boring BW-008, located on the west side of New Street approximately midway between East Main and East Water Streets. This sample, and data from monitoring wells MW-EPA-114S and Spinnaker well GZA-2, suggests that PCE originating from the Water Street area may co-mingle with a PCE plume migrating from the vicinity of the area of Union and East Main Streets as the plumes move east/southeast toward the GMR.

- Low concentrations of TCE and cDCE were detected in samples collected from shallow monitoring well KMW-4, located in the Spinnaker east end, near the GMR levee. VOCs were not detected in adjacent deep monitoring well MW-EPA-113D.

- Table 2 includes a comparison of PCE, TCE and cDCE concentrations detected in groundwater at locations where multiple depth horizons are monitored. VOCs were not

detected in any of the deep monitoring wells (MW-EPA-109D, located on the Hobart property, or MW-EPA-112D or 113D, located on the Spinnaker property).

***East Side of GMR***

The following sections discuss observations regarding the groundwater contamination in the area east of the GMR, near the East Wellfield. Figures 11 and 12 present Phase II groundwater data for the shallow and the intermediate/deep zones. Tables 2, 3 and 4 summarize data relevant to the following discussion.

- Chlorinated VOCs were not detected in any monitoring wells located east of the GMR.

- VOCs were not detected in samples from Phase II deep monitoring well MW-EPA-123D or VAS samples collected at shallower depths in the boring for this well (VAS-208). This well is screened at the same approximate depth horizon as the lower part of the screened zones in Troy production wells P-14 and P-18. These observations, when considered with regard to the other groundwater sample data collected east of the GMR, suggest that (1) VOCs detected in the Troy East Wellfield production wells are not migrating at depth from the West Wellfield area, and (2) shallow groundwater data collected to date have not indicated a contributing source on the east side of the GMR.

- VOCs were not detected in any of the samples collected at VAS boring VAS-210, located near and upgradient from Troy production well P-14.

- VOCs were not detected in groundwater screening samples collected at the 25- and 50-foot horizons at VAS boring VAS-209, located between Troy production well P-18 and the GMR. cDCE was detected at concentrations of 1.69 and 3.19 µg/L in samples from 75 and 105 feet bgs. These sample depths correlate with the upper and lower portions of the screened horizon at P-18, where cDCE is also routinely detected at similar concentrations. These observations, in light of the apparent absence of cDCE at upgradient locations east of the GMR, suggest that cDCE or a parent VOC such as TCE or PCE may be migrating beneath the GMR at a depth below 50 feet in the area between locations VAS-209 and VAS-210.

## D. Vapor Intrusion

The results of Phase II vapor intrusion monitoring are presented in Figure 13 and Table 5 and indicate the following:

- Results at locations sampled in both Phase I and Phase II were generally consistent between the two events with regard to compounds detected and locations where elevated results were noted. Although concentrations varied between the two events, Phase II and summer results that exceeded applicable screening levels were noted only at the same locations where results exceeded applicable screening levels in the Phase I and winter samples. Several property owners of locations sampled in Phase I declined access for Phase II sampling and, therefore, no Phase II and summer data are available for these locations.

- Results from additional Phase II locations sampled in the spring of 2013 indicated that the areas of most significant potential concern with regard to vapor intrusion are generally aligned with the axes of the groundwater contaminant plumes.

- The farthest downgradient location that granted access for sampling in the residential PCE plume area was located on East Canal Street between Counts and Frank Streets; results that exceeded sub-slab screening levels were observed at this location.

- The Phase I and Phase II results suggest that the areas of most significant potential concern for vapor intrusion include the following areas (1) the area west of Union Street bounded by East Walnut Street, East Main Street and East Franklin Street, (2) the area east of Union Street bounded by East Water Street, East Franklin Street and Williams Street, (3) the area bounded by Union Street, East Canal Street, East Franklin Street and Morehead Street, and (4) East Water Street east of Crawford Street.

## E. Source Area Investigations

The following sections summarize Phase II data and observations regarding contaminant source areas identified to date. Figures11, 14, and 15 and Tables 3, 4, and 6 summarize groundwater and soil VOC data pertinent to the following discussions.

***Residential Area PCE Plume***

- Historical information suggests that the area occupied by the former dry cleaner at 10 East Main Street, now beneath the footprint of the church addition, was excavated prior to construction of the new structure. It is unlikely that any structures associated with the former dry cleaner remain, as this building reportedly had no basement. The depth of excavation is unknown and has been reported as being perhaps as shallow as 6 feet, or as deep as 16 feet bgs, approximately the top of the zone of fluctuation in the water table.

- Groundwater data from Phase II borings and monitoring well sampling did not indicate other source areas of PCE for this plume. Screening data collected from Geoprobe borings on the west side of Walnut Street, on the downgradient side of the present-day First Presbyterian Church addition, indicated a relatively narrow PCE plume emitting from the area beneath the structure and flowing southeastward.

- Groundwater samples collected on the west side of Walnut Street contained lower concentrations of PCE than are typically observed in monitoring wells located farther downgradient to the southeast. However, it should be noted that groundwater concentrations measured during all Phase II sampling activities were lower at many locations than have been observed in the past, perhaps as a result of seasonal variation.

- Historical information (Sanborn maps, city directories, and other sources) indicate that a two-story building formerly located in the area now occupied by the municipal and police parking lots between Walnut and Mulberry Streets, behind the group of structures at 100-120 East Main Street, was used as an automotive repair shop prior to the mid-1960s. The shop was last operated by a Chrysler dealership that also formerly occupied the adjacent parcel where the Troy Police Department is now located at 120 East Main Street. Phase II soil samples collected along East Walnut Street in the vicinity of this building, and soil samples collected in the parking lots during Phase I, did not indicate significant VOC contamination above the zone of fluctuation in the water table. For these reasons, soil data have not indicated a significant PCE source area associated with the former garage.

- During Phase II, inspection of and historical information for the building basement at 102 East Main Street did not indicate past site use or features that would suggest additional primary sources of contamination at that location. For this reason, the groundwater contamination observed in front of this building on Main Street during the Phase I soil boring program, and VOCs in air samples collected in structures in this block, are currently believed to be associated with migration of PCE in shallow groundwater from the original suspected source (former dry cleaner at 10 East Main), which is located hydraulically upgradient.

***Water Street Area***

- In Phase I, soil data confirmed the presence of significant concentrations of PCE, TCE, and 1,1,2-trichlorothane (1,1,2-TCA) in shallow soils (2 to 4 feet bgs) in a sample collected near the Hobart loading dock. Additional borings were completed in the area behind the Hobart building during Phase II to evaluate the extent of soil contamination. One or more of these compounds were detected in the soil samples, at depths ranging from 1 to 4 feet bgs. The highest concentrations were detected in samples collected on the northwest west side of the rear loading dock structure in soil samples SB-002 and SB-003. The maximum concentrations detected were as follows: PCE – 2,000 micrograms per kilogram (µg/kg); TCE – 1,700 µg/kg; 1,1,2-TCA 6.9 µg/kg; and, cDCE – 36 µg/kg.

- As previously discussed, VOCs were not detected in Phase II samples from groundwater monitoring wells OEPA-13 and MW-EPA-122S located immediately upgradient from the Hobart facility, confirming that a groundwater contaminant plume originates on the Hobart property (see Figure 11).

- Hobart formerly used PCE in a vapor degreaser that was located in a room adjacent to the East Water Street side of the building. The degreaser was located in the area close to monitoring well OEPA-12, which is the farthest upgradient location on East Water Street where PCE had been detected in groundwater. It also contained the highest concentrations of PCE and TCE detected in the East Water Street Area during Phase II. According to the site owner, PCE was brought in from the rear loading dock area in drums and was not stored in tanks. The vapor degreaser was removed in 2008, and the floor in the degreaser area was replaced with a new slab.

- The present Hobart building dates to the 1930s and was built atop structural footer walls that were associated with a whiskey warehouse dating to the late 1800s. The present main floor sits above these footers and ranges from about 1 to 2 feet above ground level at the northwest end to over 10 feet above present ground level at the southeast end. There is a partial basement in the rear of the building, beneath the northeast building area and loading dock. A wooden structure formerly ran along the back (northeast) side of the building to facilitate loading via a rail spur that ran from Clay Street southeast to the Spinnaker facility. The wooden addition burned down some time prior to the 1960s; the rail line was also removed from this area at an unknown date.

- At the Spinnaker site, Phase I soil data had indicated the presence of significant concentrations of TCE and cDCE, in shallow soils (2 to 4 feet bgs) at the western side of the western parking lot in the vicinity of monitoring well KMW-10. PCE was also detected at this location at lower concentrations than TCE and cDCE. KC's quarterly groundwater samples from well KMW-10 typically contain cDCE. This observation suggests a source or secondary source of cDCE in the vicinity of well KMW-10. The cDCE may be a degradation

product of TCE. During Phase II, three additional soil borings (SB008, SB014, and SB015) were completed in this general area of the parking lot (see Figure 15). One or more of the compounds PCE, TCE, or cDCE was detected in soil samples from each boring, at depths ranging from 1 to 9 feet bgs. Concentrations detected were lower than those detected in the Phase I soil sample. The highest concentrations detected were as follows: PCE – 11 µg/kg; TCE – 1,200 µg/kg; and cDCE – 180 µg/kg.

- Two additional Phase II soil samples (SB006 and SB007) were collected in the extension of the western Spinnaker parking between the residences on Water Street and the levee. Low concentrations of TCE (maximum of 20 µg/L) were detected in a sample collected at 6 feet bgs in one boring.

- A Phase II shallow groundwater screening sample (BW014) collected from a Geoprobe boring at the far northwestern and upgradient end of the parking lot extension contained low concentrations of TCE and cDCE, indicating that some TCE and cDCE are migrating into that area from upgradient locations (Figure 11).

- A series of five Phase II borings (SB009, SB010, SB011, SB012, and SB013) were completed around the north corner of the Spinnaker western plant building adjacent to (1) an area where, according to a 2007 report, contaminated soils were excavated and removed, but soils with detectable concentrations of TCE and cDCE were left in place after the excavation, and (2) an area between the building and the levee where Ohio EPA had detected TCE and cDCE in groundwater samples collected using a Geoprobe in 2007. During Phase II of the RI, chlorinated VOCs were detected in soil samples from each boring. Maximum concentrations were as follows: PCE – 7.1 µg/kg; TCE - 180 µg/kg; cDCE - 9.5 µg/kg; and 1,1,1-TCA - 11 µg/kg. TCE or cDCE were detected in two groundwater screening samples collected in the area between the rear of the Spinnaker building and the levee; the maximum concentrations were 39 µg/L TCE and 5.6 µg/L cDCE in the sample from boring BW-017. This sample was from the same general vicinity where Ohio EPA conducted sampling in 2007.

- A shallow groundwater screening sample (BW013) was collected from a boring in a residential yard directly adjacent to and upgradient from the fence line near well KMW-10. This sample contained PCE (18.9 µg/L) and TCE (1.47 µg/L). As previously discussed, the Phase II groundwater sample from well KMW-10 did not contain detectable concentrations of VOCs; however, KC's quarterly monitoring data typically indicates the presence of cDCE in this well.

- Review of historical information indicates that a former dry cleaner and machine shop was located in the area now occupied by the Spinnaker western parking lot prior to 1955. The location was in the approximate area west of the easternmost entrance gate. The exact nature of activities conducted at this dry cleaner is unknown.

- The original source of the TCE detected in groundwater behind the Spinnaker building is unconfirmed. As previously discussed, soils were excavated and removed from the area along the western plant wall and northern building corner to remediate VOC contamination related to toluene spills and chlorinated VOCs from unknown sources. However, soil containing detectable concentrations of TCE and cDCE was left in place in the exterior areas excavated (Shaw 2006). According to KC, occasional equipment cleaning was conducted using small quantities of TCE in buckets in the vicinity of a door near the northern corner of the building. Limited borings have been completed within the Spinnaker building near the

northern wall in the past and did not indicate a contaminant source beneath the area now occupied by the western plant building. The building was constructed in the 1960s.

- A production well that once supplied water to the plant is located beneath the area now covered by the footprint of this building; the well has been decommissioned, but it is unknown if it was ever abandoned.

***Additional Potential Source Area, Union and East Main Streets***

- During Phase II, two borings (BW-006 and MAI-1) and a permanent monitoring well (MW-EPA-120S) were completed in the area directly upgradient from the former Waltz Cleaners at 432 East Main Street (southwestern corner of Union and East Main Streets). Groundwater samples were collected from each of these locations, and VOCs were not detected (see Figure 11). PCE was detected in Phase I and Phase II samples from monitoring well MW-EPA-103S, located on the downgradient side of the group of structures that were formerly used as part of the dry cleaner operations associated with 432 East Main Street. The PCE concentration detected in the Phase II sample from well MW-103S was 19 µg/L.

- The former dry cleaner operation consisted of an original building located closest to East Main Street and at least three structures or additions that extend southward along Union Street or were incorporated into the operation over time. All dry cleaning equipment appears to have been removed from the building, which is currently used as an electronics repair shop. Several exhaust fans and vents are located in the buildings. A floor drain and sump is located in the southernmost building; this drain does not appear to currently be connected to the sewer.

## 4.0 SUMMARY OF DATA GAPS

The following items were identified as data gaps with regard to the primary objectives of delineating the nature, sources, and extent of contamination at the ETCA site.

### A. Groundwater Contamination

***Shallow Zone***

- The downgradient extent of the Residential Area PCE plume in the vicinity of Floral Avenue is currently based on screening level data collected from Geoprobe borings. A permanent monitoring point may be necessary to verify the downgradient edge of the plume and support evaluation of the effectiveness of remediation efforts at a "point of compliance."
- Various geochemical and physical parameter data are needed to evaluate and select potential remedial alternatives, particularly since it appears that most of the original sources of contamination no longer remain and that secondary sources (such as back-diffusion of sorbed contaminants from fine grained materials) may be contributing ongoing releases of contaminants to groundwater.
- A review of quarterly water level data collected by KC at the Spinnaker site is needed to evaluate seasonal fluctuations in groundwater flow direction in areas near the GMR.

***Intermediate Zone***

- Various geochemical and physical parameter data are needed in the vicinity of the original suspected source of the residential area PCE plume to evaluate and select potential remedial alternatives.

***Deep Zone***

- Additional water level data for VOCs are needed to evaluate flow patterns when production well P-14 is pumping.
- Additional VAS data are needed to identify the depth and location where shallow contamination originating at sources west of the river appears to be migrating beneath the river to the Troy East Wellfield area.

## B. Source Area Confirmation

***Residential Area PCE Plume Source Area***

- Additional data are needed in proximity to the church addition at Walnut and East Main Streets to determine if residual contaminated source material (contaminated vadose zone soil) remains at this location.
- Various physical and geochemical parameter data are needed to evaluate and select remedial alternatives.
- Vapor intrusion data collected within the church addition are needed to supplement data collected on the building exterior as the original suspected source area (10 East Main Street) is completely beneath the footprint of the present-day structure.
- Physical and geochemical data are needed for possible secondary source areas (such as the Clay Street area) to evaluate the potential for ongoing release of contaminants and suitability of various remedial alternatives.

***Water Street Area***

- The horizontal extent of shallow soil contamination detected in the area between East Water Street and the GMR, including both the Spinnaker and Hobart properties, is not yet confirmed.
- The specific sources that caused the soil and groundwater contamination on the Hobart and Spinnaker properties have not been fully characterized.
- The source and extent of the TCE plume located between the Spinnaker building and the levee have not been confirmed.

***Former Dry Cleaner 432 East Main Street***

- Additional data are needed to determine if residual contaminated source material (contaminated vadose zone soil) is present at this location and (if possible) identify the locations of the original releases.

## C. Vapor Intrusion

- A sufficient pool of vapor intrusion data was collected during the RI to support human health risk assessment. However, based on the results of Phase I and Phase II, more than 100 structures where vapor intrusion monitoring has not been conducted are located within the areas above the shallow groundwater contaminant plumes. EPA has requested access to many of these locations, and owners have either denied access or did not respond. Additional sampling may be warranted to evaluate the need for interim measures and for evaluating and delineating contaminant source areas.

- Only a single sample port was installed at most of the 2006-2007 locations sampled by EPA during the time-critical removal action (TCRA) when sub-slab vapor samples were collected. Current EPA and Ohio EPA guidance recommends at least two sampling ports per slab. In addition, no official follow-up testing (or confirmation that the systems are still operating) has been conducted at most locations where abatement systems were installed in 2007. EPA may consider a need for a future testing at these locations, depending on the results of the feasibility study (FS) with regard to remedial alternatives and timeframes.

## D. Surface Water and Sediment

Phase II groundwater data, collected after the surface water and sediment samples were collected in Phase I, indicate that the PCE plume extends farther downgradient than previously thought and could discharge to the GMR at locations beyond the farthest 2010 downstream surface water sampling point. However, the stream is straight and channelized, and the west bank is lined with concrete throughout this area. The channelization prevents accumulation of significant amounts of sediment in this area, and the stream bottom is highly scoured and rocky. For these reasons, the presence of contaminated sediment is unlikely. However, surface water samples should be collected in the area of likely discharge of the PCE plume to the west bank of the GMR, in the area between the downstream end of the Spinnaker plant and the vicinity of MCD piezometer T-13/T-14 to evaluate whether chlorinated VOCs are being discharged from the shallow groundwater zone to surface water in the GMR.

## REFERENCES

Shaw Group, Inc. 2006. "Supplemental Soil and Groundwater Delineation Report - Spinnaker Coatings Facility." October.

SulTRAC. 2010. "Sampling and Analysis Plan (Field Sampling Plan and Quality Assurance Project Plan- Phase I Remedial Investigation and Feasibility Study (RI/FS), East Troy Contaminated Aquifer Superfund Site, Troy, Miami County, Ohio." July 14.

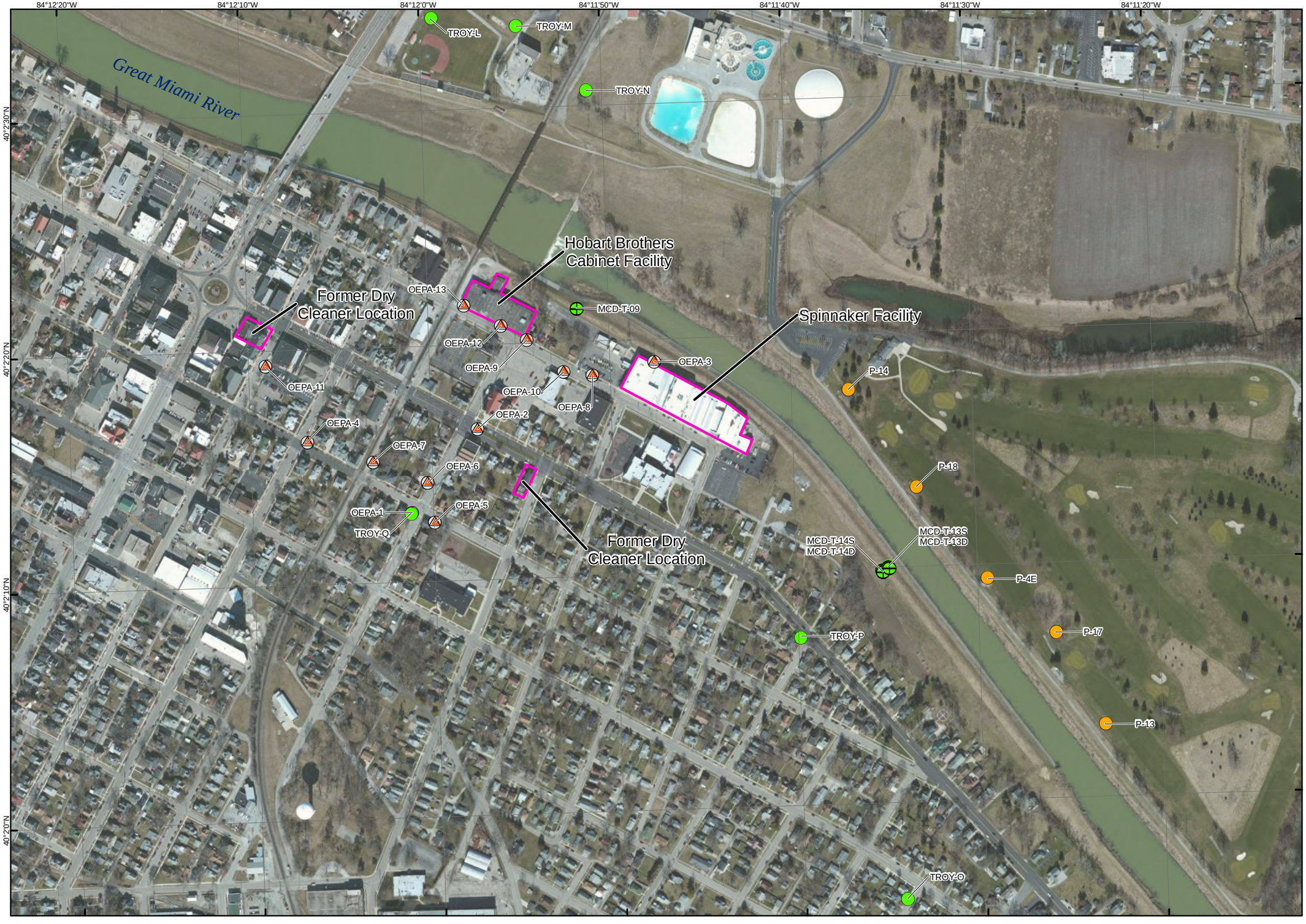
SulTRAC. 2011. "Sampling and Analysis Plan Addendum, Vapor Intrusion Monitoring Program, East Troy Contaminated Aquifer Site RI/FS, Troy, Miami County, Ohio, Revision 0." December 9.

SulTRAC. 2013. "Phase I Investigation Summary and Proposed Phase II Investigation Scoping Technical Memorandum for the East Troy Contaminated Aquifer Site." July 12.

# FIGURES

# ETCA SITE RI/FS
Troy, Miami County, OH

**Figure 1**
RI Phase II
ETCA Site Location
and Features




- Ohio EPA Well
- Troy Monitoring Well
- Troy Production Well
- MCD Well

N

0 200 400 Feet

Notes:
D - Deep
ETCA - East Troy Contaminated Aquifer
MCD - Miami Conservation District
OEPA - Ohio Environmental Protection Agency
P - City of Troy Supply Well
RI/FS - Remediation Investigation/Feasibility Study
S - Shallow
T - Miami Conservancy District Monitoring Well

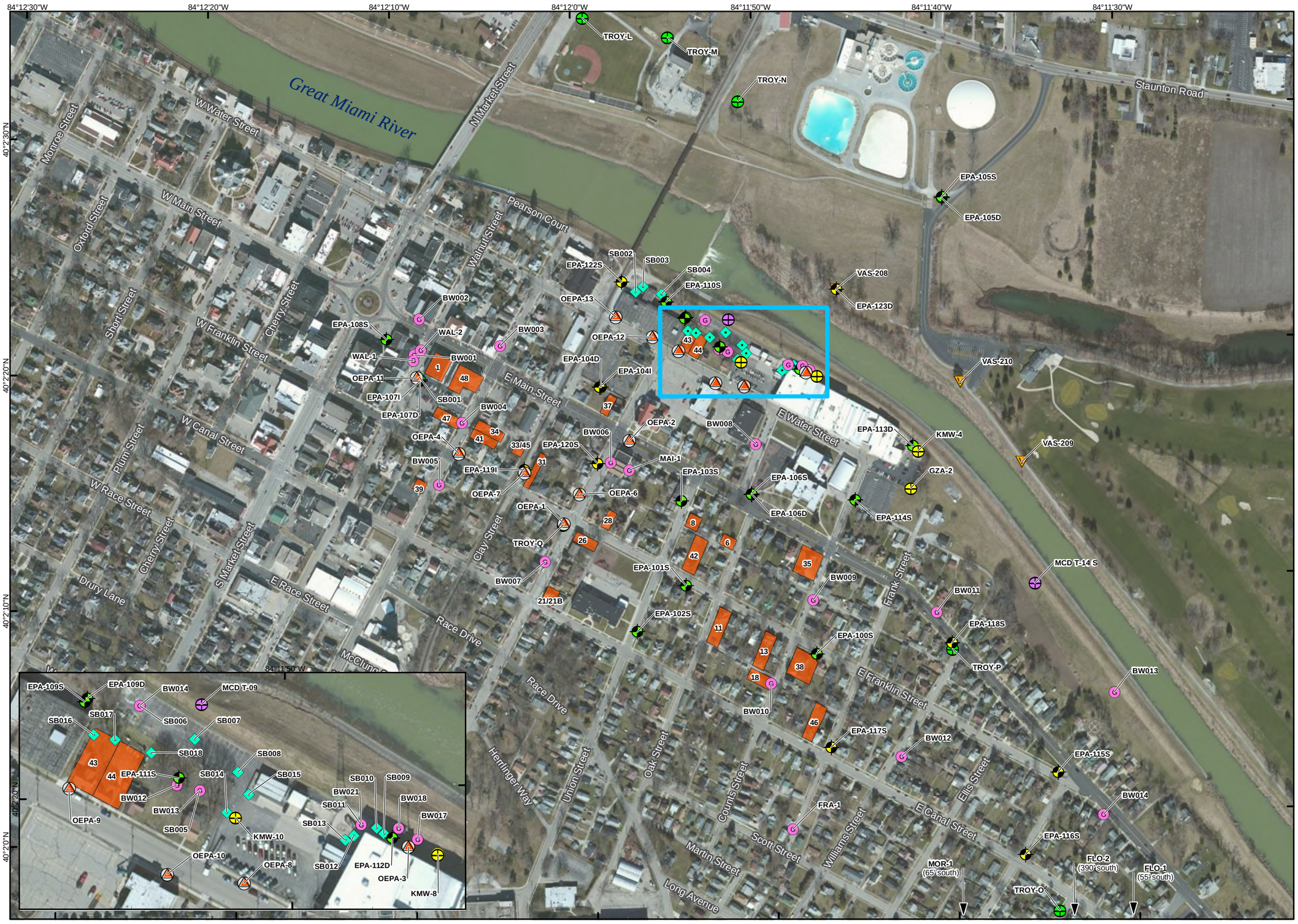

Date: 7/26/2013
Analyst: dale.vonbusch

SulTRAC

File: L:\Cincinnati\Projects\Troy\Phase_II_Tech_Memo\mxds\Fig1_ETCAsiteLocationAndFeatures_072613.mxd

# ETCA SITE RI/FS
Troy, Miami County, OH

**Figure 2**
Phase II RI
Sampling Locations




## Legend

- Ohio EPA Well
- Phase I RI Well
- Phase II RI Well
- Troy Monitoring Well
- KC Monitoring Well
- MCD Well
- Geoprobe Location
- VAS Location
- Phase II Soil Sample (February, 2013)
- Vapor Intrusion Monitoring
- Area Enlarged in Inset Map to Show Detail

N

0 200 400 Feet

Notes:
D - Deep
ETCA - East Troy Contaminated Aquifer
KMW - Kimberly Clark Well
OEPA - Ohio Environmental Protection Agency
PW - Production Well
RAC - Race Street
S - Shallow
VAS - Vertical Aquifer Sampling
Geoprobe samples FLO-1, FLO-2, MOR-1 are located outside the extent of this map.

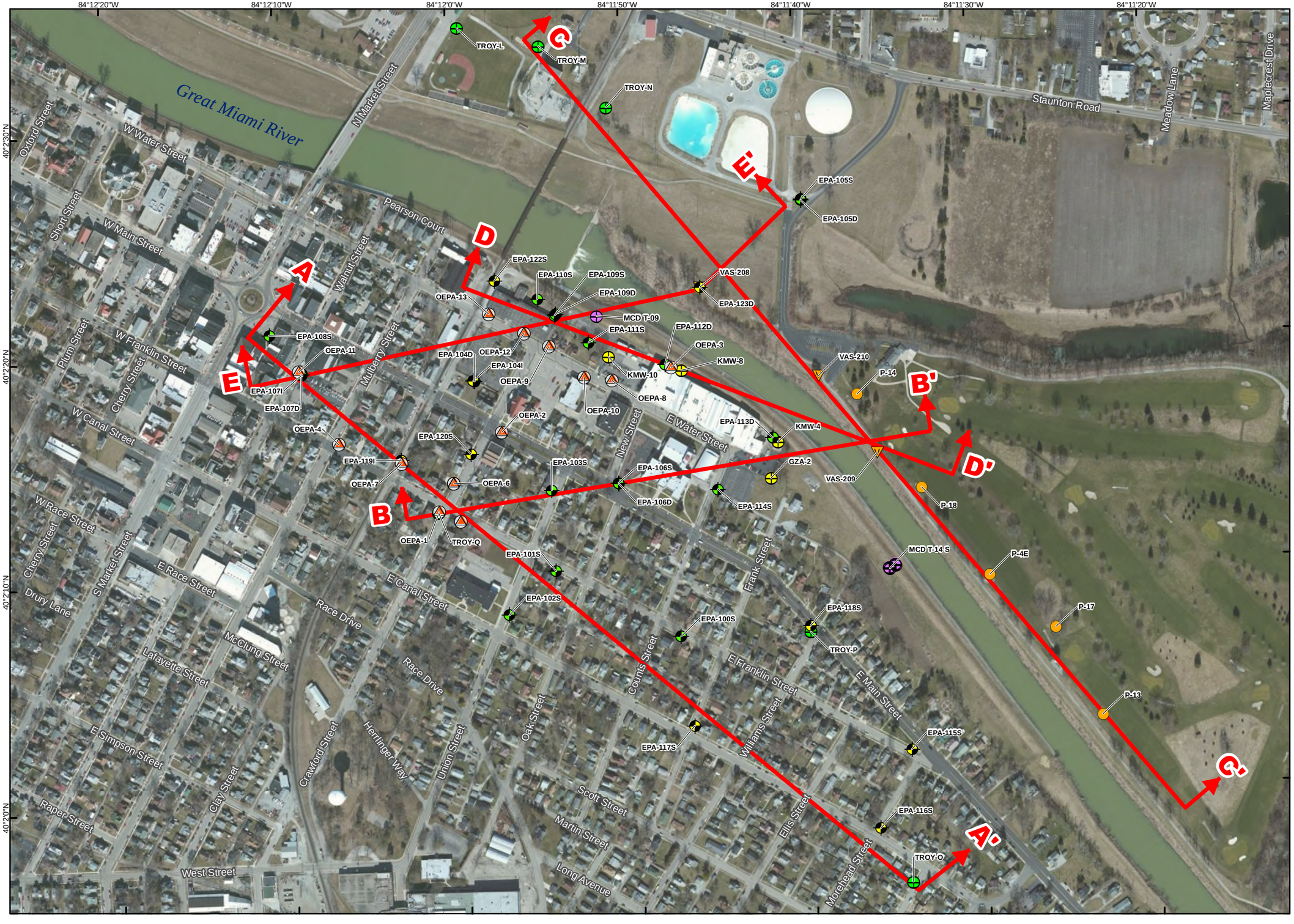

Date: 7/26/2013
Analyst: dale.vonbusch

SulTRAC

File: L:\Cinci\Projects\Troy\Phase_II_Tech_Memo\mxds\Fig2_AllPhaseIILocations_072613.mxd

# ETCA SITE RI/FS
Troy, Miami County, OH

**Figure 3**
Phase II RI
Cross Section Locations




N

0 200 400 Feet

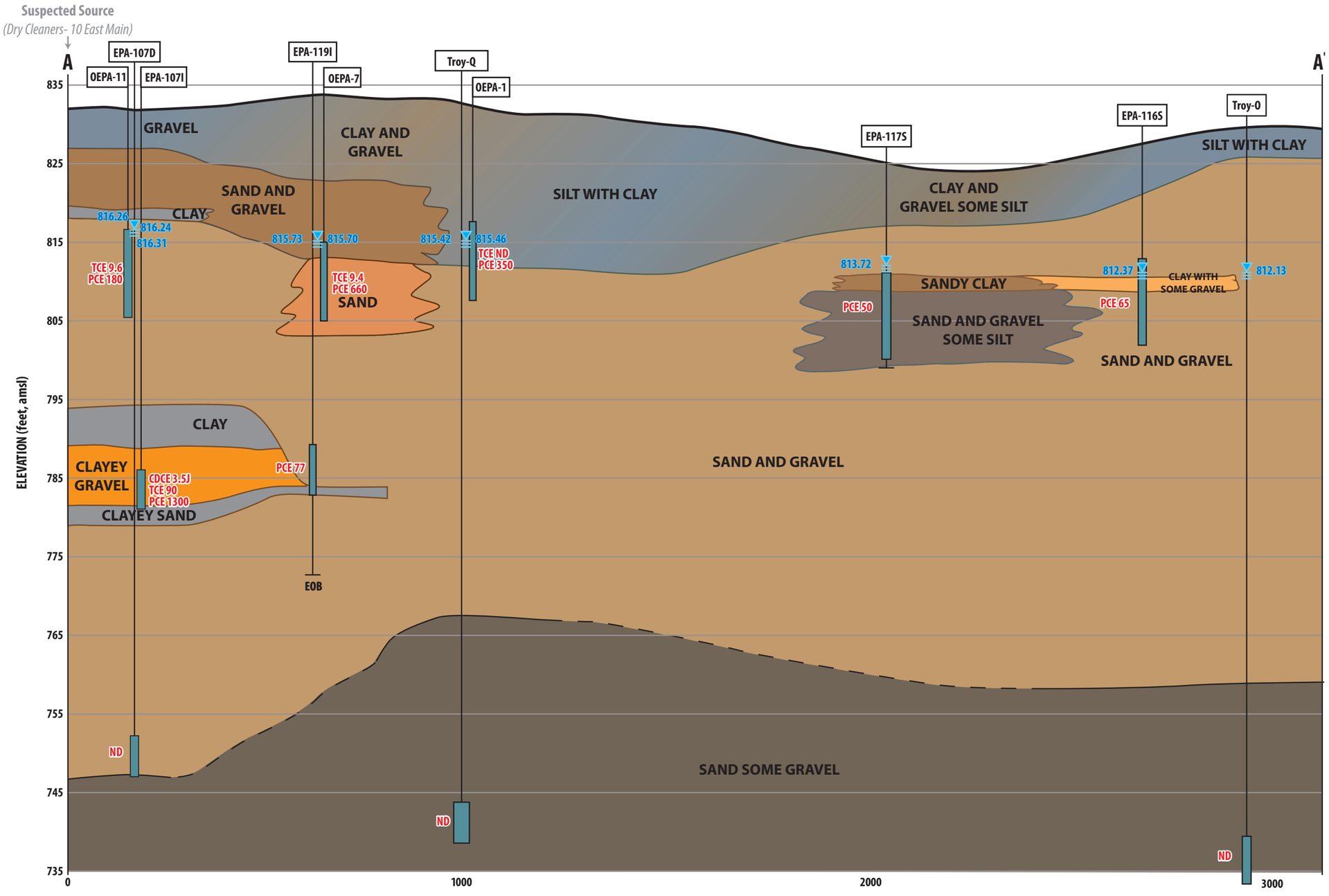
Notes:
D - Deep
ETCA - East Troy Contaminated Aquifer
FS - Feasibility Study
KMW - Kimberly Clark Well
OEPA - Ohio Environmental Protection Agency
PW - Production Well
RI - Remedial Investigation
S - Shallow
VAS - Vertical Aquifer Sampling

- Ohio EPA Well
- Phase I RI Well
- Phase II RI Well
- Troy Monitoring Well
- KC Monitoring Well
- MCD Well
- Troy Production Well
- VAS Location
- Cross Section


Date: 7/26/2013
Analyst: dale.vonbusch

SulTRAC

File: L:\Cinci\Projects\Troy\Phase_II_Tech_Memo\mxds\Fig3_CrossSectionLocations_072613.mxd




# ETCA SITE RI/FS

Troy, Miami County, OH

**Figure 4**

Generalized Geologic Cross Section A to A'

Notes:

| | | |
|---|---|---|
| amsl | = | Above Mean Sea Level |
| ND | = | Non Detect |
| DTW | = | Depth to Water |
| EPA | = | U.S. Environmental Protection Agency |
| OEPA | = | Ohio Environemental Protection Agency |
| EOB | = | End of Boring |
| ETCA | = | East Troy Contaminated Aquifer |
| CDCE | = | cis-1,2-dichloroethene |
| J | = | Value qualified as estimated |
| TCE | = | Trichloroethene |
| P | = | Troy Production Well |
| PCE | = | Tetrachloroethene |
| RI/FS | = | Remedial Investigation/Feasibility Study |

Approximate piezometic elevation on 2/25/13: actual measured value (feet, amsl) is depicted next to well.

ND Values shown in red font are concentrations detected in micrograms per liter (µg/L) Jan.-Feb. 2013

Approximate well screen interval

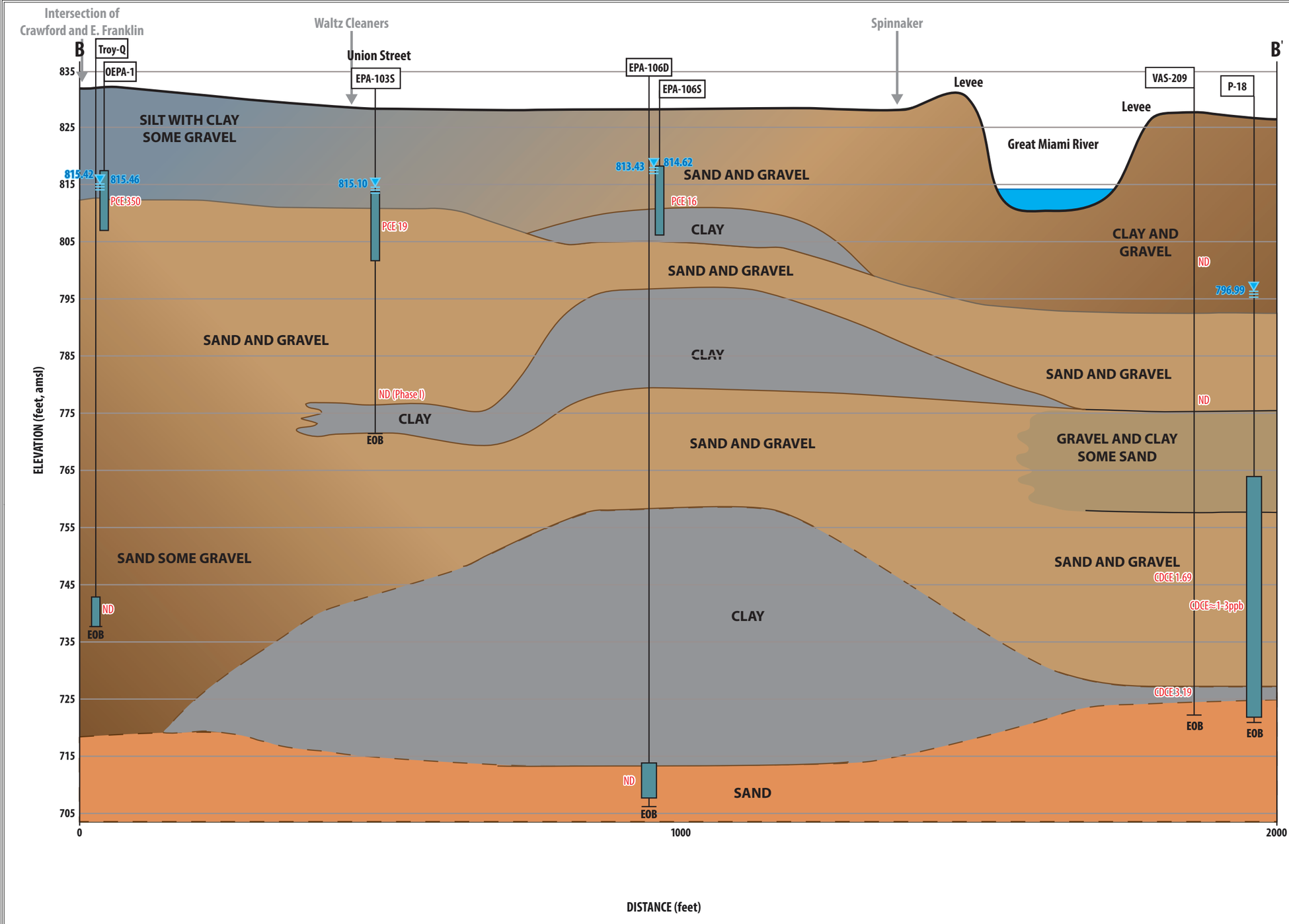
Boundary unconfirmed; data exist only at individual boring locations


SulTRAC

# ETCA SITE RI/FS

Troy, Miami County, OH

**Figure 5**
Generalized Geologic
Cross Section B to B'




Notes:

| | | |
|---|---|---|
| amsl | = | Above Mean Sea Level |
| ND | = | Non Detect |
| DTW | = | Depth to Water |
| EPA | = | U.S. Environmental Protection Agency |
| OEPA | = | Ohio Environemental Protection Agency |
| EOB | = | End of Boring |
| ETCA | = | East Troy Contaminated Aquifer |
| CDCE | = | cis-1,2-dichloroethene |
| J | = | Value qualified as estimated |
| TCE | = | Trichloroethene |
| P | = | Troy Production Well |
| PCE | = | Tetrachloroethene |
| RI/FS | = | Remedial Investigation/Feasibility Study |
| VAS | = | Vertical Aquifer Sampling (temporary) boring: piezometric elevation N/A |

Approximate piezometic elevation on 2/25/13: actual measured value (feet, amsl) is depicted next to well.

ND Values shown in red font are concentrations detected in micrograms per liter (µg/L) Jan.-Feb. 2013

Approximate well screen interval

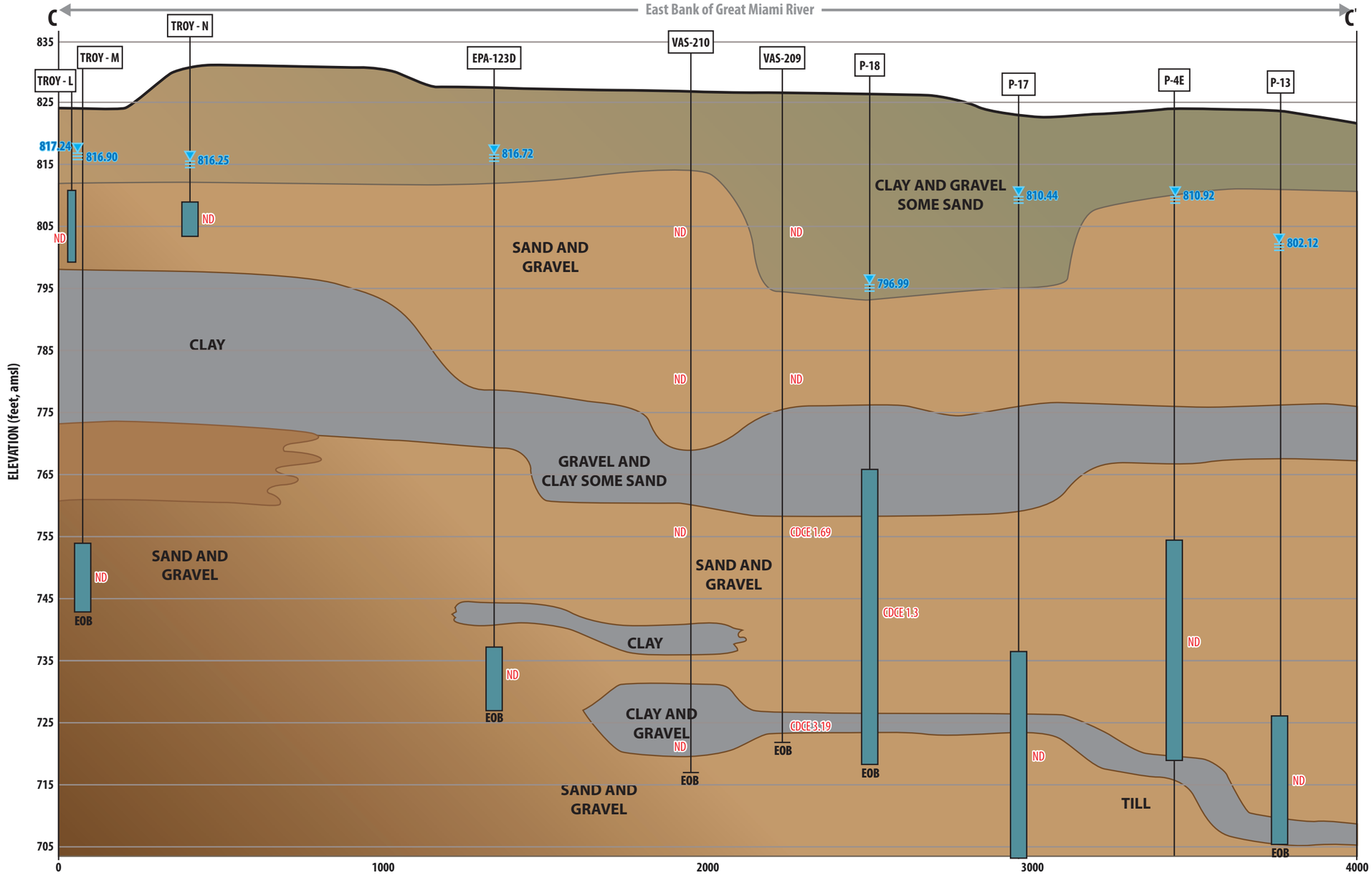
Boundary unconfirmed; data exist only at individual boring locations


SulTRAC

# ETCA SITE RI/FS

Troy, Miami County, OH

**Figure 6**
Generalized Geologic
Cross Section C to C'




Notes:

| | | |
|---|---|---|
| amsl | = | Above Mean Sea Level |
| ND | = | Non Detect |
| DTW | = | Depth to Water |
| EPA | = | U.S. Environmental Protection Agency |
| OEPA | = | Ohio Environemental Protection Agency |
| EOB | = | End of Boring |
| ETCA | = | East Troy Contaminated Aquifer |
| CDCE | = | cis-1,2-dichloroethene |
| J | = | Value qualified as estimated |
| TCE | = | Trichloroethene |
| P | = | Troy Production Well |
| PCE | = | Tetrachloroethene |
| RI/FS | = | Remedial Investigation/Feasibility Study |
| VAS | = | Vertical Aquifer Sampling (temporary) boring: piezometric elevation N/A |

Approximate piezometic elevation on 2/25/13: actual measured value (feet, amsl) is depicted next to well.

ND Values shown in red font are concentrations detected in micrograms per liter (µg/L) Jan.-Feb. 2013

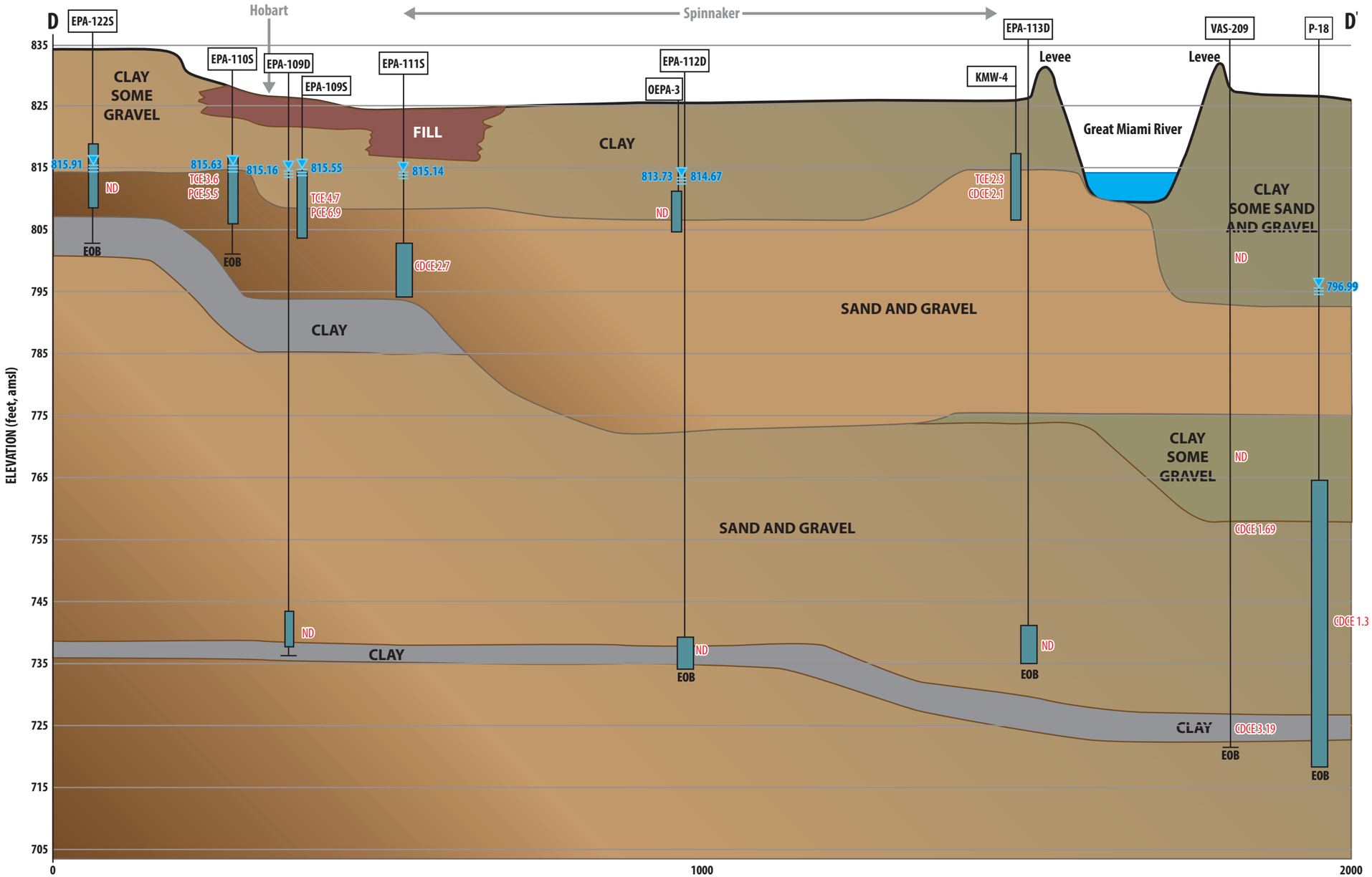
Approximate well screen interval


SulTRAC

# ETCA SITE RI/FS

Troy, Miami County, OH

**Figure 7**
Generalized Geologic
Cross Section D to D'




Notes:

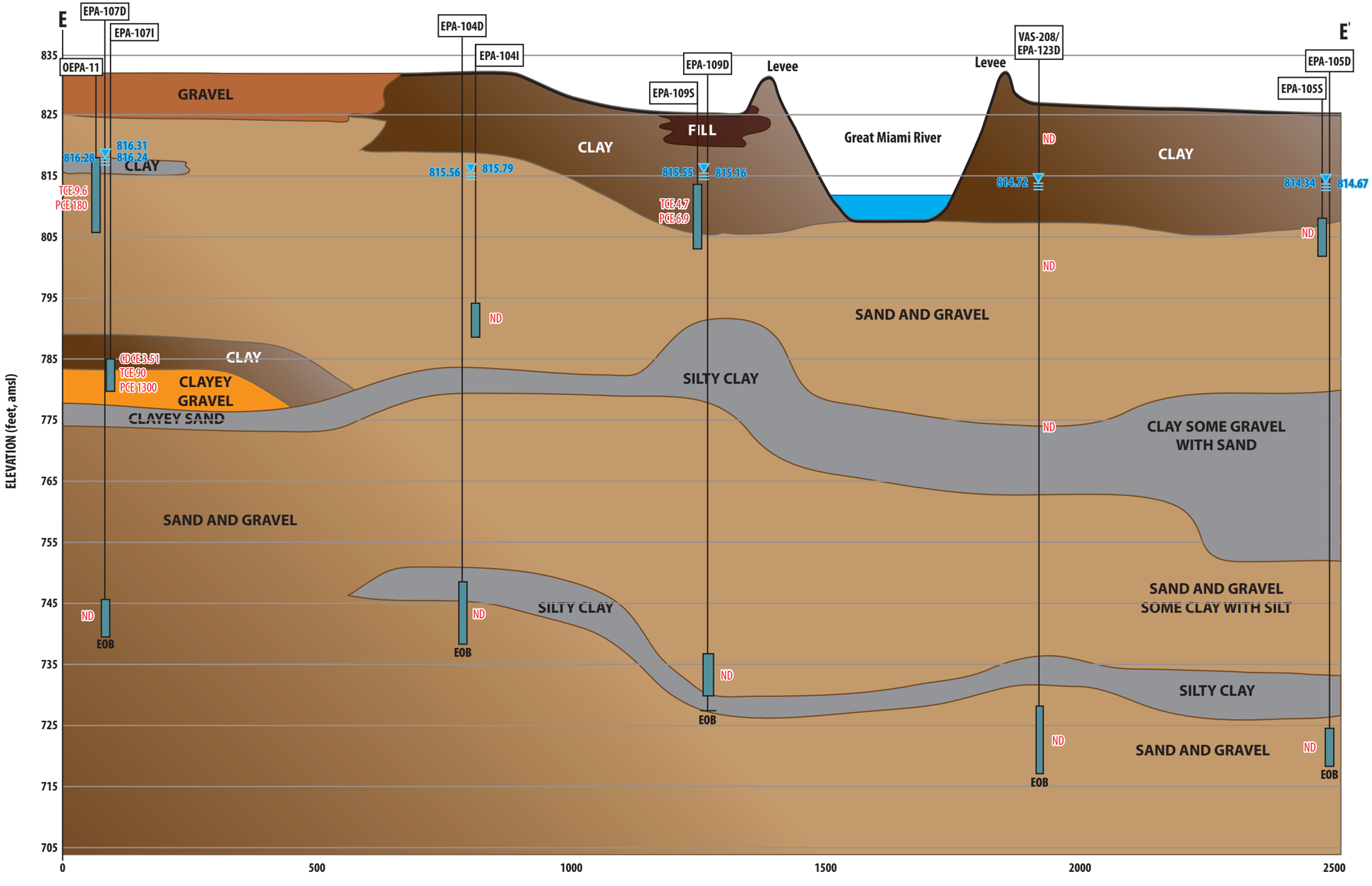
| | | |
|---|---|---|
| amsl | = | Above Mean Sea Level |
| ND | = | Non Detect |
| DTW | = | Depth to Water |
| EPA | = | U.S. Environmental Protection Agency |
| OEPA | = | Ohio Environemental Protection Agency |
| EOB | = | End of Boring |
| ETCA | = | East Troy Contaminated Aquifer |
| CDCE | = | cis-1,2-dichloroethene |
| J | = | Value qualified as estimated |
| TCE | = | Trichloroethene |
| P | = | Troy Production Well |
| PCE | = | Tetrachloroethene |
| RI/FS | = | Remedial Investigation/Feasibility Study |
| VAS | = | Vertical Aquifer Sampling (temporary) boring: piezometric elevation N/A |

Approximate piezometic elevation on 2/25/13: actual measured value (feet, amsl) is depicted next to well.

ND Values shown in red font are concentrations detected in micrograms per liter (µg/L) Jan.-Feb. 2013

Approximate well screen interval


SulTRAC




# ETCA SITE RI/FS

Troy, Miami County, OH

**Figure 8**
Generalized Geologic
Cross Section E to E'

Notes:

| | | |
|---|---|---|
| amsl | = | Above Mean Sea Level |
| ND | = | Non Detect |
| DTW | = | Depth to Water |
| EPA | = | U.S. Environmental Protection Agency |
| OEPA | = | Ohio Environemental Protection Agency |
| EOB | = | End of Boring |
| ETCA | = | East Troy Contaminated Aquifer |
| CDCE | = | cis-1,2-dichloroethene |
| J | = | Value qualified as estimated |
| TCE | = | Trichloroethene |
| P | = | Troy Production Well |
| PCE | = | Tetrachloroethene |
| RI/FS | = | Remedial Investigation/Feasibility Study |
| VAS | = | Vertical Aquifer Sampling (temporary) boring: piezometric elevation N/A |

Approximate piezometic elevation on 2/25/13: actual measured value (feet, amsl) is depicted next to well.

ND Values shown in red font are concentrations detected in micrograms per liter (µg/L) Jan.-Feb. 2013

Approximate well screen interval


SulTRAC

# ETCA SITE RI/FS
Troy, Miami County, OH

**Figure 9**
RI Phase II
Shallow Zone
Groundwater Elevations
February 25, 2013


Ohio EPA Well
Phase I RI Well
Phase II RI Well
Troy Monitoring Well
KC Monitoring Well
MCD Well
Apparent Groundwater Flow Direction February 25, 2013
Interpolated Groundwater Contour
Extrapolated Groundwater Contour

N

0 200 400
Feet

Notes:
ETCA - East Troy Contaminated Aquifer
KC - Kimberly Clark
KMW - Spinnaker Site/ Kimberly Clark Monitoring Well
MCD - Miami Conservation District
OEPA - Ohio Environmental Protection Agency
RI/FS - Remediation Investigation/Feasibility Study
S - Shallow
T - Miami Conservancy District Monitoring Well

Date: 9/11/2013
Analyst: dale.vonbusch

SulTRAC

File: L:\Cinc\Projects\Troy\Phase_II_Tech_Memo\mxds\Fig-9_PII_Tech_Feb-2013_Shallow_Gwater_091113.mxd

# ETCA SITE RI/FS
Troy, Miami County, OH

**Figure 10**
RI Phase II
Deep Zone
Groundwater Elevations
February 25, 2013


- EPA Monitoring Well Installed for RI Phase I
- City of Troy Water Supply Production Well
- City of Troy Deep Monitoring Well
- Apparent Groundwater Flow Direction February 25, 2013
- Interpolated Groundwater Contour
- Extrapolated Groundwater Contour

N

0 200 400
Feet

Notes:
D - Deep
ETCA - East Troy Contaminated Aquifer
RI/FS - Remediation Investigation/Feasibility Study


Date: 7/25/2013
Analyst: dale.vonbusch

SulTRAC

File: L:\Cinc\Projects\Troy\Phase_II_Tech_Memo\mxds\Fig10_PII_Tech_Feb-2013_Deep_Gwater_072413.mxd

# ETCA SITE RI/FS
Troy, Miami County, OH

**Figure 11**
RI Phase II
Groundwater Sampling Data
Shallow Zone
December, 2012 and
February-March, 2013

- Ohio EPA Well
- Phase I RI Well
- Phase II RI Well
- Troy Monitoring Well
- KC Monitoring Well
- MCD Well
- Geoprobe Location
- Total Chlorinated VOCs >100 µg/L (ppb) Plume Area
- Total Chlorinated VOCs <100 µg/L (ppb) Plume Area

N

0 200 400
Feet

- Exceeds EPA VISL
- Exceeds EPA MCL
- Exceeds both MCL & VISL
- Detected above reporting limit

Notes:
GZA - Spinnaker Site/ Kimberly Clark Monitoring Well
ETCA - East Troy Contaminated Aquifer
KC - Kimberly Clark
KMW - Spinnaker Site/ Kimberly Clark Monitoring Well
MCD - Miami Conservancy District
MCL - Maximum Contaminant Level
OEPA - Ohio Environmental Protection Agency
RI/FS - Remediation Investigation/Feasibility Study
S - Shallow
T - Miami Conservancy District Monitoring Well
VAS - Vertical Aquifer Sample
VISL - Vapor Intrusion Screening Level
µg/L - Micrograms per liter
Groundwater sample concentrations in µg/L.
Geoprobe sample FLO-2 is located outside the extent of this map.

Date: 7/25/2013
Analyst: dale.vonbusch

SulTRAC

File: L:\Cinci\Projects\Troy\Phase_II_Tech_Memo\mxds\Fig11_Phase_1-2_Gwafer_Shallow_Samples-Results_072513.mxd

# ETCA SITE RI/FS
Troy, Miami County, OH

**Figure 12**
RI Phase II
Groundwater Sampling Data
Intermediate-Deep Zones
February-March, 2013

- Phase I RI Well
- Phase II RI Well
- Troy Monitoring Well
- Vertical Aquifer Sampling Location (VAS)

N

0 200 400
Feet

- Exceeds EPA VISL
- Exceeds EPA MCL
- Exceeds both MCL & VISL
- Detected above reporting limit

Notes:
D - Deep
ETCA - East Troy Contaminated Aquifer
I - Intermediate
MCL - Maximum Contaminant Level
RI/FS - Remediation Investigation/Feasibility Study
VAS - Vertical Aquifer Sample
VISL - Vapor Intrusion Screening Level
µg/L - Micrograms per liter
Groundwater sample concentraions in µg/L


Date: 7/25/2013
Analyst: dale.vonbusch

SulTRAC

File: L:\Cinci\Projects\Troy\Phase_II_Tech_Memo\mxds\F12_Phase_1-2_Gwater_Deep_Samples-Results_072513.mxd

# ETCA SITE RI/FS
## Troy, Miami County, OH

**Figure 13**
**RI Phase II**
**Vapor Intrusion**
**Sampling Data**
**August 2012**
**and**
**April-May 2013**

84°12'10"W
84°12'0"W
84°11'50"W
84°11'40"W
40°2'20"N
40°2'10"N

S Market Street
E Main Street
E Water Street
Walnut Street
E Franklin Street
New Street
Clay Street
Crawford Street
Mulberry Street
E Race Street
Race Drive
McClung Street
Lafayette Street
Herrlinger Way
Union Street
E Canal Street
Oak Street
Counts Street
Frank Street
Williams Street

1 48 47 34 41 33/45 31 39 37 43 44 28 26 8 6 42 35 21/21B 11 13 18 38 46

## Legend

- Phase II VI Sampled Property With Sample Location Number
- No Exceedence of Screening Level
- Indoor Air Exceedence
- Sub-Slab Exceedence
- Indoor Air and Sub-Slab Exceedence

Notes:
EPA - Environmental Protection Agency
ETCA - East Troy Contaminated Aquifer
RI/FS - Remediation Investigation/Feasibility Study
VI - Vapor Intrusion

Screening Levels used were lowest of the following:

U.S. EPA
Screening Level, May 2013

Ohio Department of Health Site-Specific
Sreening level, April 2012

U.S. EPA VI Screening Level
Calculator accessed May 25, 2013

Screening level exceedences are identified for one or more of the following contaminants of concern; Tetrachloroethene, trichloroethene, cis-1,2-dichloroethene, and vinyl chloride. See Table 5 for additional screening level exceedences and complete Phase II analytical results.

N

0 110 220 Feet

Miami County, Ohio

Date: Friday, September 06, 2013
Analyst: dale.vonbusch

SulTRAC

# ETCA SITE RI/FS
Troy, Miami County, OH

**Figure 14**
RI Phase I & II
Soil Sample Results
for VOCs

84°12'30"W 84°12'20"W 84°12'10"W 84°12'0"W 84°11'50"W 84°11'40"W 84°11'30"W
40°2'30"N 40°2'20"N 40°2'10"N 40°2'0"N

TPD3 (4-6')
PCE - 2.6 J
Toluene - 74
TPD3 (10-12')
PCE - 3.4 J

MAI1 (12-14')
PCE - 15

MUL1 (8-10')
Benzene - 4.6
PCE - 16
MUL1 (14-16')
PCE - 6.7
TCE - 0.20 J

CHE1
SB001 (11')
PCE - 2.4 J

MUL2

TPD2 (6-8')
PCE - 5
TPD2 (12-14')
PCE - 8.1

CLY2 (10-12')
PCE - 6.9

TPD1 (2-4')
PCE - 3.9 J
TPD1 (6-8')
PCE - 12
TPD1 (14-16')
Toluene - 100

FRA3 (6-8')
PCE - 14
FRA3 (14-16')
PCE - 23

FRA4 (12-14')
PCE - 11
FRA4 (20-22')
PCE - 6.2

CLY4
CLY3
CLY5

RAC2
RAC1

FRA5 (12-14')
PCE - 2.9 J

CRA1 (0-2')
PCE - 9.5 J
CRA1 (6-8')
PCE - 10
CRA1 (12-14')
PCE - 140
TCE - 0.72 J

HER1

STA1

Munroe Street
W Water Street
N Market Street
Staunton Road
Pearson Court
W Main Street
Oxford Street
Plum Street
Clay Street
W Franklin Street
S Market Street
Mulberry Street
E Franklin Street
E Water Street
E Main Street
W Canal Street
Short Street
Clay Street
New Street
W Race Street
Cherry Street
Drury Lane
E Race Street
Race Drive
McClung Street
Lafayette Street
W Simpson Street
Cherry Street
Terrace Place
E Simpson Street
Raper Street
Crawford Street
Herringer Way
Union Street
Oak Street
Frank Street
Williams Street
Ellis Street
E Canal Street
Martin Street
Scott Street
Morehead Street
Courts Street
Long Avenue
State Route 41
West Street
Walnut Street S
Mulberry Street S
Clay Street S
Crawford Street S

N
0 200 400 Feet

Phase I Soil Sample (May-June, 2012)
Phase II Soil Sample (February, 2013)
Hobart & Spinnaker Areas Shown on Figure 15

Notes:
CLY - Clay Street
ETCA - East Troy Contaminated Aquifer
RI/FS - Remediation Investigation/ Feasibility Study
SB - Soil Boring
STP - Saint Patrick Parking Lot
VOC - Volatile Organic Compound
µg/kg - Micrograms per kilogram

Soil sample concentrations in µg/kg


Date: 7/25/2013
Analyst: dale.vonbusch

SulTRAC

File: L:\CinciProjects\Troy\Phase_II_Tech_Memo\mxds\Fig14_Phase_1-2_Soil_Samples-Results_072513.mxd

# ETCA SITE RI/FS
Troy, Miami County, OH

**Figure 15**
RI Phase I & II
Soil Sample Results
for VOCs
Hobart and Spinnaker Areas

84°12'0"W
84°11'50"W
40°2'20"N

Mulberry Street
Clay Street
Crawford Street
E Main Street
New Street

| HOB3 (2-4') | |
|---|---|
| Ethylbenzene | 54 J |
| PCE | 28,000 |
| 1,1,2-TCA | 2,700 J |
| TCE | 89,000 |
| o-Xylene | 200 J |
| m,p-Xylene | 210 J |
| **HOB3 (10-12')** | |
| Benzene | 10,000 J |
| Carbon Disulf. | 1,100 J |
| Ethylbenzene | 1,700 J |
| PCE | 2,700 J |
| o-Xylene | 10,000 J |
| m,p-Xylene | 26,000 |

| SB002 (1') | |
|---|---|
| PCE | 110 |
| TCE | 89 |
| **SB002 (4')** | |
| cis-1,2-DCE | 3.5 J |
| PCE | 1,800 |
| 1,1,2-TCE | 6.9 |
| TCE | 1,700 |

| SB003 (1') | |
|---|---|
| PCE | 1,500 |
| TCE | 870 |
| **SB003 (4')** | |
| cis-1,2-DCE | 36 |
| PCE | 2,000 |
| 1,1,2-TCE | 2.3 J |
| TCE | 1,400 |

| SB004 (1') | |
|---|---|
| PCE | 13 |

| HOB2 (4-6') | |
|---|---|
| Benzene | 0.51 J |

| HOB1 (6-8') | |
|---|---|
| Benzene | 0.29 J |

| SB008 (1') | |
|---|---|
| TCE | 19 |
| **SB008 (4')** | |
| TCE | 21 |
| **SB008 (6')** | |
| TCE | 16 J |

| HOB5 (6-8') | |
|---|---|
| Benzene | 1.9 J |
| TCE | 0.22 J |
| **HOB-5 (10-12')** | |
| TCE | 0.30 J |
| **HOB-5 (16-18'')** | |
| PCE | 31 |
| TCE | 7.2 |

| SB007 (4') | |
|---|---|
| TCE | 4.7 |
| **SB007 (6')** | |
| TCE | 20 |

| SB012 (5') | |
|---|---|
| TCE | 71 |
| **SB012 (7')** | |
| 1,1,1-TCA | 9.1 |
| TCE | 50 |
| **SB012 (9')** | |
| TCE | 88 |

| SB011 (5') | |
|---|---|
| PCE | 2.4 J |
| TCE | 56 |
| **SB011 (7')** | |
| TCE | 45 |
| **SB011 (9')** | |
| cis-1,2-DCE | 9.5 |
| TCE | 63 |

| SB010 (5') | |
|---|---|
| PCE | 3.2 J |
| 1,1,1-TCA | 16 |
| TCE | 180 |
| **SB010 (7')** | |
| TCE | 16 |
| **SB010-DUP (7')** | |
| PCE | 2.4 J |
| 1,1,1-TCA | 7.1 |
| TCE | 61 |
| **SB010 (9')** | |
| TCE | 18 |

| SB009 (5') | |
|---|---|
| 1,1,1-TCA | 9.4 |
| TCE | 50 |
| **SB009-DUP (5')** | |
| TCE | 34 |
| **SB009 (7')** | |
| 1,1,1-TCA | 7.8 |
| TCE | 14 |
| **SB009 (9')** | |
| 1,1,1-TCA | 11 |
| TCE | 12 |

| SB014 (1') | |
|---|---|
| PCE | 2.7 J |
| TCE | 3.8 J |
| **SB014 (4')** | |
| cis-1,2-DCE | 2.3 J |
| PCE | 11 |
| TCE | 1,200 |
| **SB014 (6')** | |
| TCE | 14 |
| **SB014-DUP (6')** | |
| PCE | 1.9 J |
| TCE | 17 |

| SPN1 (2-4') | |
|---|---|
| cis-1,2-DCE | 14,000 |
| Ethylbenzene | 14 J |
| PCE | 410 J |
| TCE | 22,000 |
| o-Xylene | 37 J |
| m,p-Xylene | 54 J |
| **SPN1 (6-8')** | |
| cis-1,2-DCE | 8.3 |
| PCE | 2.9 J |
| TCE | 90 |

| SB015 (1') | |
|---|---|
| cis-1,2-DCE | 5.3 |
| **SB015 (4')** | |
| PCE | 6.0 |
| **SB015-DUP (4')** | |
| cis-1,2-DCE | 180 |
| trans-1,2-DCE | 12 |
| TCE | 17 |
| **SB015 (6')** | |
| TCE | 3.5 J |

| SB013 (5') | |
|---|---|
| TCE | 100 |

| SPN2 (6-8') | |
|---|---|
| PCE | 7.1 |
| TCE | 2.5 J |
| **SPN2-DUP (6-8')** | |
| TCE | 2.0 J |
| **SPN2 (10-12')** | |
| PCE | 6.6 |
| TCE | 11 |

HOB7
HOB6
HOB4
SB006
SB017
SB016
SB018
SB015
SB005
STP2
STP1
CLY1

Phase I Soil Sample (May-June, 2012)
Phase II Soil Sample (February, 2013)

N

0 50 100 Feet

Notes:
ETCA - East Troy Contaminated Aquifer
HOB - Hobart Area
RI/FS - Remediation Investigation/ Feasibility Study
SB - Soil Boring
SPN - Spinnaker Area
VOC - Volatile Organic Compound
µg/kg - Micrograms per kilogram

Soil sample concentrations in µg/kg


Date: 7/25/2013
Analyst: dale.vonbusch

SulTRAC

File: L:\Cinci\Projects\Troy\Phase_II_Tech_Memo\mxds\Fig15_Phase_1-2_Soil_Samples-Results_HOB-SPN_072513.mxd

## TABLES

**TABLE 1**
**EAST TROY CONTAMINATED AQUIFER SITE - TROY, OHIO**
**SUMMARY OF GROUNDWATER ELEVATIONS - PHASE II GROUNDWATER SAMPLING**
**February 25, 2013**

| Well ID | LOCATION | TOC EL (1) | TOC EL (2) | TD | DTW 02-25-13 | GW EL 02-25-13 | Zone | Screen Interval (feet bgs) | Screen Elevation (Feet AMSL) | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|
| **Ohio EPA Wells** | | | | | | | | | | |
| OEPA-1 | SW Corner Franklin and Crawford; adj. to Troy MW-Q | 832.46 | 832.43 | 24.7 | 16.97 | 815.46 | S | 15 - 25 | 817.4 - 807.4 | |
| OEPA-2 | In grass median on Main at Crawford | 830.89 | 830.84 | 19.7 | 15.31 | 815.53 | S | 15 - 20 | 815.8 - 810.8 | |
| OEPA-3 | W end Spinnaker site, between plant and river | 825.13 | 825.06 | 21.4 | 11.33 | 813.73 | S | 12 -- 22 | 813.1 - 803.1 | DTW verified as 11.48 on 2-26-12 |
| OEPA-4 | NE Corner Franklin and Mulberry | 833.22 | 833.17 | 27.4 | 17.22 | 815.95 | S | 18 - 28 | 815.2 - 805.2 | |
| OEPA-5 | S side Franklin Appx. 75 ft SE of Crawford | 830.29 | 830.27 | 27.2 | 14.92 | 815.35 | S | 18 - 28 | 812.3 - 802.3 | |
| OEPA-6 | W side Crawford Appx. 75 feet N. of Franklin | 831.62 | 831.58 | 27.2 | 16.07 | 815.51 | S | 18 - 28 | 813.6 - 803.6 | |
| OEPA-7 | E side of Clay, about 75 ft. NE of Franklin | 833.52 | 833.48 | 26.9 | 17.78 | 815.70 | S | 18 - 28 | 815.5 - 805.5 | |
| OEPA-8 | NE side Water St., in front of Spinnaker west parking lot. | 828.58 | 828.51 | 27.2 | 13.38 | 815.13 | S | 18 - 28 | 810.5 - 800.5 | |
| OEPA-9 | NE side Water St., near Clay; front of residence | 830.43 | 830.36 | 14.5 | 14.81 | 815.55 | S | 18 - 28 | 812.4 - 802.4 | |
| OEPA-10 | SW side Water St., front of St. Patrick School | 829.70 | 829.63 | 24.8 | 14.29 | 815.34 | S | 18 - 28 | 811.6 - 801.6 | |
| OEPA-11 | SE Side Walnut St., between Main and Franklin near Police Dept. | 833.33 | 833.29 | 27.3 | 17.03 | 816.26 | S | 16 - 28 | 817.3 - 805.3 | |
| OEPA-12 | NE side Water St., between Clay and Crawford; E end Hobart Cab. | 831.54 | 831.48 | 27.5 | 15.80 | 815.68 | S | 15 - 28 | 816.5 - 803.5 | |
| OEPA-13 | NE side Water St., near Clay; W end of Hobart Cab. | 833.68 | 833.62 | 27.4 | 17.80 | 815.82 | S | 15 - 28 | 818.6 - 805.6 | |
| **City of Troy Wells** | | | | | | | | | | |
| MW-L | E side of river near SR 55; by baseball fields, NW of water plant | 825.39 | 826.02 | 25.1 | 8.78 | 817.24 | S | 20 - 25 | 806.0 - 801.0 | |
| MW-M | E side of river near SR 55; by baseball fields, NW of water plant | 824.61 | 825.54 | 81.0 | 8.64 | 816.90 | D | 71 - 81 | 753.61- 743.6 | |
| MW-N | E side of river ; water plant; about 300 feet SE of MW-L/M cluster | 831.08 | 831.79 | 31.7 | 15.54 | 816.25 | S | 21.7 - 26.7 | 809.41- 804.4 | |
| MW-O | SW Corner Scott and Canal | 829.31 | 829.21 | 100.1 | 17.08 | 812.13 | D | 90 - 100 | 739.3 - 729.3 | |
| MW-P | SW Corner Williams and Main | 827.65 | 827.61 | 94.6 | 15.78 | 811.83 | D | 90 - 100 | 737.6 - 727.6 | |
| MW-Q | SW Corner Franklin and Crawford; adj. to OEPA-1 | 832.70 | 832.70 | 94.0 | 17.28 | 815.42 | D | 89 - 94 | 743.7 - 738.7 | |
| P-14 | East Wellfield; northernmost production well | 827.65 | NM | 124.0 | 16.31 | 811.34 | D | 84 - 124 | 743.6 - 703.6 | |
| P-18 | East Wellfield; about 300 feet SE of PW-14 | 826.90 | NM | 101.0 | 29.91 | 796.99 | D | 61 - 106 | 765.9 - 720.9 | |
| P-4E | East Wellfield; about 300 feet SE of PW-18 | 825.80 | NM | 105.0 | 14.88 | 810.92 | D | 70 - 105 | 755.8 - 720.8 | |
| P-17 | East Wellfield; about 300 feet SE of P-4 | 824.41 | NM | 122.0 | 13.97 | 810.44 | D | 87 - 122 | 737.41- 702.4 | |
| P-13 | East Wellfield; about 300 feet SE of P-17 | 824.77 | NM | 118.0 | 22.65 | 802.12 | D | 98 - 118 | 726.8 - 706.8 | |
| P-21 | East Wellfield - piezometer - downstream end | 820.99 | NM | 100.0 | 9.98 | 811.01 | D | - 100 | -721.0 | Top of screen unknown |
| **Kimberly Clark (Spinnaker) Wells** | | | | | | | | | | |
| KMW-1 | Spinnaker E. End | 825.53 | NM | 22.5 | 12.92 | 812.61 | S | 12 - 22 | 813.5 - 803.5 | |
| KMW-4 | Spinnaker E. End | 826.47 | 826.56 | 20.5 | 14.25 | 812.31 | S | 10 - 20 | 816.5 - 806.5 | |
| GZA-2 | Spinnaker E. End - parking area | 826.71 | 826.75 | 25.5 | 14.08 | 812.67 | S | 20 - 25 | 806.7 - 801.7 | |
| KMW-10 | Spinnaker W. End | 826.97 | NM | 20.5 | 11.86 | 815.11 | S | 10 - 20 | 816.0 - 806.0 | |
| KMW-17 | Spinnaker W. End | 825.11 | NM | 20.5 | 11.35 | 813.76 | S | 10 - 20 | 815.1 - 805.1 | |
| KMW-15 | Spinnaker W. End | 827.59 | NM | 22.5 | 13.36 | 814.23 | S | 12 - 22 | 815.6 - 805.6 | |
| KMW-8 | Spinnaker W. End | 825.32 | NM | 30.5 | 11.81 | 813.51 | S | 10 - 30 | 815.3 - 795.3 | |
| RS-04 | Spinnaker W. End | 825.39 | NM | 20.4 | 11.98 | 813.41 | S | - 20 | -805.4 | Top of screen unknown |
| **MCD Piezometers** | | | | | | | | | | |
| MCD T-09 | Top Levee, behind Hobart Cabinet | 833.00 | 834.04 | 29.4 | 19.62 | 814.42 | S | -29 | - 805.4 | Top of screen unknown |
| MCD T-13S | Top Levee, near end of Williams Street | 831.49 | | 29.3 | | | | - 29 | - 802.19 | Top of screen unknown |
| MCD-T-14S | Base of Levee, near end of Williams Street | 821.24 | 822.40 | 19.0 | 11.38 | 811.02 | S | - 19 | - 803.4 | Top of screen unknown |
| **US EPA Phase I and II Wells** | | | | | | | | | | |
| MW-EPA-100S | East Franklin, east of Counts | | 826.35 | 25.0 | 12.63 | 813.72 | S | 15 - 25 | 811.3 - 801.3 | |
| MW-EPA-101S | East Franklin, between Union and Oak | | 827.99 | 25.0 | 13.12 | 814.87 | S | 15 - 25 | 812.0 - 802.0 | |
| MW-EPS-102S | South Union, near Race | | 827.29 | 24.0 | 12.27 | 815.02 | S | 14 - 24 | 813.3 - 803.3 | |
| MW-EPA-103S | South Union, near East Main | | 828.51 | 24.0 | 13.41 | 815.10 | S | 14 - 24 | 814.51- 804.5 | |
| MW-EPA104I | Alley between Clay and Crawford, near St. Patrick parking | | 832.96 | 43.0 | 17.17 | 815.79 | I | 38 - 43 | 794.0 - 789.0 | |
| MW-EPA-104D | Alley between Clay and Crawford, near St. Patrick parking | | 832.58 | 87.0 | 17.02 | 815.56 | D | 77 - 87 | 755.6 - 745.6 | |
| MW-EPA-105S | Rutherford Dr. (East of River) | | 825.17 | 22.0 | 10.83 | 814.34 | S | 12 -- 22 | 813.2 - 803.2 | |
| MW-EPA-105D | Rutherford Dr. (East of River) | | 825.35 | 97.0 | 11.12 | 814.23 | D | 92 - 97 | 733.3 - 728.3 | |
| MW-EPA-106S | NE Corner New and E. Main | | 828.58 | 21.0 | 13.91 | 814.67 | S | 11 -- 21 | 817.6 - 807.6 | |
| MW-EPA-106D | NE Corner New and E. Main | | 828.47 | 120.0 | 15.04 | 813.43 | D | 115 - 120 | 713.5 - 708.5 | |
| MW-EPA-107I | South Walnut - between Main and Franklin - near OEPA-11 | | 833.38 | 53.0 | 17.14 | 816.24 | I | 48 - 53 | 785.4 - 780.4 | |
| MW-EPA-107D | South Walnut - between Main and Franklin - near OEPA-11 | | 832.97 | 85.0 | 16.66 | 816.31 | D | 80 - 85 | 752.0 - 747.0 | |
| MW-EPA-108S | (Background) - East side of town square - near East Main | | 833.32 | 25.0 | 16.76 | 816.56 | S | 15 - 25 | 818.3 - 808.3 | |
| MW-EPA-109S | Hobart - east end | | 826.72 | 22.0 | 11.17 | 815.55 | S | 12 -- 22 | 814.7 - 804.7 | |
| MW-EPA-109D | Hobart - east end | | 826.33 | 87.0 | 11.17 | 815.16 | D | 82 - 87 | 744.3 - 739.3 | |
| MW-EPA-110S | Hobart - west | | 827.37 | 22.0 | 11.74 | 815.63 | S | 12-- 22 | 815.6 - 805.6 | |
| MW-EPA-111S | Vacant lot between Hobart and Spinnaker | | 824.98 | 30.0 | 9.84 | 815.14 | S | 20 - 30 | 804.0 - 794.0 | |
| MW-EPA-112D | Spinnaker west end - near OEPA-2 | | 825.32 | 90.0 | 10.65 | 814.67 | D | 85 - 90 | 740.3 - 735.3 | |
| MW-EPA-113D | Spinnaker east end - near KMW-4 | | 826.41 | 90.0 | 13.61 | 812.80 | D | 85 - 90 | 741.4 - 736.4 | |
| MW-EPA-114S | School facilities lot - E. side of Frank between Water and Main | | 827.44 | 23.0 | 14.00 | 813.44 | S | 13 - 23 | 814.4 - 804.4 | |
| MW-EPA-115S | East Franklin at E. Main st opposite Morehead St | | 827.32 | 23.0 | 13.93 | 813.39 | S | 13 - 23 | 814.3 - 804.3 | |
| MW-EPA-116S | NE Corner Morehead and E. Canal | | 828.54 | 25.0 | 16.27 | 812.27 | S | 15 - 25 | 813.5 - 803.5 | |
| MW-EPA-117S | NE Corner Frank and E. Canal | | 824.40 | 24.0 | 10.68 | 813.72 | S | 14 - 24 | 810.4 - 800.4 | |
| MW-EPA-118S | SW corner E. Main and Williams, near Troy MW-P | | 827.41 | 24.0 | 13.16 | 814.25 | S | 14 - 24 | 813.4 - 803.4 | |
| MW-EPA-119I | E side of Clay, about 75 ft. NE of Franklin-near OEPA 7 | | 833.72 | 50.0 | 17.99 | 815.73 | I | 45 - 50 | 788.7 - 783.7 | |
| MW-EPA-120S | W side of S Crawford, about 75 ft. S of E. Main | | 830.55 | 24.0 | 14.99 | 815.56 | S | 14 - 24 | 816.5 - 806.5 | |
| MW-EPA-122S | Hobart- west end near RR tracks | | 834.08 | 25.0 | 18.17 | 815.91 | S | 15 - 25 | 819.1 - 809.1 | |
| MW-EPA-123D | Rutherford Dr (east of river) about 500 ft. NW of golf course parking lot | | 827.28 | 100.0 | 12.56 | 814.72 | D | 90 - 100 | 737.3 - 727.3 | |

**NOTES:**

USEPA wells surveyed to horizontal position by Haley-Dusa Surveying group, LLC
AMSL - Above mean sea level
bgs - Below ground surface
D - Deep zone
DTW - depth to water
GW EL - groundwater elevation
I - Intermediate zone
MCD - Miami Conservancy District
S - Shallow zone
TD - total depth
TOC EL - elevation of top of inner casing/ measurement point (notes refer to (1) pre-RI well survey datareported by other entities or (2) elevations field surveyed during RI 2012-2013.
NM - Not Measured

**TABLE 2**
**EAST TROY CONTAMINATED AQUIFER SITE - TROY, OHIO**
**GROUNDWATER POTENTIAL VERTICAL GRADIENTS AND RELATIVE VOC CONCENTRATIONS - PAIRED WELLS**
**RI Phase II Groundwater Sampling Event - February 2013**

| Well ID Cluster | GW EL 02-25-13 | Gradient (ft) | TCE | PCE | cis-1,2-Dichloroethene |
|---|---|---|---|---|---|
| | | | Reported Concentration - µg/L | | |
| **EPA-107I** | 816.24 | 0.07 Upward | 90 | 1300 | 3.5 |
| **EPA-107D** | 816.31 | | ND | ND | ND |
| | | | | | |
| **OEPA 11** | 816.26 | 0.02 Downward | 9.6 | 180 | ND |
| **EPA-107I** | 816.24 | | 90 | 1300 | 3.5 |
| | | | | | |
| **OEPA 11** | 816.26 | 0.05 Upward | 9.6 | 180 | ND |
| **EPA-107D** | 816.31 | | ND | ND | ND |
| | | | | | |
| **EPA-104I** | 815.79 | 0.23 Downward | ND | ND | ND |
| **EPA-104D** | 815.56 | | ND | ND | ND |
| | | | | | |
| **EPA-105S** | 814.34 | 0.11 Downward | ND | ND | ND |
| **EPA-105D** | 814.23 | | ND | ND | ND |
| | | | | | |
| **EPA-106S** | 814.67 | 1.24 Downward | ND | 16 | ND |
| **EPA-106D** | 813.43 | | ND | ND | ND |
| | | | | | |
| **EPA-109S** | 815.55 | 0.39 Downward | 4.7 | 6.9 | ND |
| **EPA-109D** | 815.16 | | ND | ND | ND |
| | | | | | |
| **OEPA 3** | 813.73 | 0.94 Upward | ND | ND | ND |
| **EPA-112D** | 814.67 | | ND | ND | ND |
| | | | | | |
| **KMW 4** | 812.31 | 0.49 Upward | 2.3 | ND | 2.1 |
| **EPA-113D** | 812.80 | | ND | ND | ND |
| | | | | | |
| **OEPA 7** | 815.70 | 0.03 Upward | 9.4 | 660 | ND |
| **EPA-119I** | 815.73 | | ND | 77 | ND |
| | | | | | |
| **OEPA 1** | 815.46 | 0.04 Downward | 4.5 | 350 | ND |
| **Troy Q** | 815.42 | | ND | ND | ND |
| | | | | | |
| **EPA-118S** | 814.25 | 2.42 Downward | ND | ND | ND |
| **Troy P** | 811.83 | | ND | ND | ND |
| | | | | | |
| **Troy L** | 817.24 | 0.34 Downward | ND | ND | ND |
| **Troy M** | 816.90 | | ND | ND | ND |

ND - not detected
GW EL - groundwater elevation measured on February 25, 2013
TCE- trichloroethene- concentrations from February-March 2013 sampling event
PCE- tetrachloroethene - concentrations from February-March 2013 sampling event
µg/L- micrograms per liter or parts per billion (ppb)

**TABLE 3**
**ANALYTICAL RESULTS FOR VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER**
**EAST TROY CONTAMINATED AQUIFER**
**FEBRUARY AND MARCH 2013**

| **Sample Location** | MW-OEPA-3-0213 | MW-KMW-8-0213 | MW-EPA-112D-0213 | MW-KMW-10-0213 | MW-GZA-2-0213 | MW-KMW-4-0213 | MW-KMW-4-0213-DUP | MW-EPA-114S-0213 | MW-EPA-113D-0213 | RBCT022613 Rinsate Blank | RBLF22613 Rinsate Blank | MW-EPA-111S-0213 | MW-OEPA-8S-0213 | MW-OEPA-10-0213 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sample Number** | E3ZP0 | E3ZP1 | E3ZP2 | E3ZP3 | E3ZP4 | E3ZP5 | E3ZP6 | E3ZP7 | E3ZP8 | E3ZP9 | E3ZQ0 | E3ZQ1 | E3ZQ2 | E3ZQ3 |
| **Sample Date** | 2/26/2013 | 2/26/2013 | 2/26/2013 | 2/26/2013 | 2/26/2013 | 2/26/2013 | 2/26/2013 | 2/26/2013 | 2/26/2013 | 2/26/2013 | 2/26/2013 | 2/27/2013 | 2/27/2013 | 2/27/2013 |
| **Sample Time** | 1220 | 1050 | 1127 | 1250 | 1444 | 1445 | 1445 | 1536 | 1715 | 1645 | 1740 | 1015 | 1025 | 1119 |
| **LABORATORY PARAMETERS:** | | | | | | | | | | | | | | |
| **Volatile Organic Compounds (VOC) - µg/L** | | | | | | | | | | | | | | |
| Dichlorodifluoromethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Chloromethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Vinyl Chloride | 5.0 UJ | 5.0 UJ | 5.0 UJ | 5.0 UJ | 5.0 UJ | 5.0 UJ | 5.0 UJ | 5.0 U | 5.0 U | 5.0 UJ | 5.0 UJ | 5.0 U | 5.0 U | 5.0 U |
| Bromomethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Chloroethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Trichlorofluoromethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,1-Dichloroethene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Acetone | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Carbon disulfide | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Methyl acetate | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Methylene chloride | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| trans-1,2-Dichloroethene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Methyl tert-Butyl ether | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,1-Dichloroethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| cis-1,2-Dichloroethene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 2.1 J | 2.3 J | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 2.7 J | 9.9 | 2.3 J |
| 2-Butanone | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Bromochloromethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Chloroform | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,1,1-Trichloroethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Cyclohexane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Carbon Tetrachloride | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Benzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2-Dichloroethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,4-Dioxane | 100 R | 100 R | 100 R | 100 R | 100 R | 100 R | 100 R | 100 R | 100 R | 100 R | 100 R | 100 R | 100 R | 100 R |
| Trichloroethene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 2.3 J | 2.5 J | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Methylcyclohexane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2-Dichloropropane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Bromodichloromethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| cis-1,3-Dichloropropene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 UJ | 5.0 UJ | 5.0 U | 5.0 U | 5.0 UJ | 5.0 UJ | 5.0 UJ |
| 4-Methyl-2-pentanone | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Toluene | 5.0 U | 5.0 U | 5.0 U | 14 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| trans-1,3-Dichloropropene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 UJ | 5.0 UJ | 5.0 U | 5.0 U | 5.0 UJ | 5.0 UJ | 5.0 UJ |
| 1,1,2-Trichloroethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 UJ | 5.0 UJ | 5.0 U | 5.0 U | 5.0 UJ | 5.0 UJ | 5.0 UJ |
| Tetrachloroethene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 23 | 5.0 U | 5.0 U | 25 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 2.3 J | 7 |
| 2-Hexanone | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Dibromochloromethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2-Dibromoethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Chlorobenzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Ethylbenzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| o-Xylene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| m,p-Xylene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Styrene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Bromoform | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Isopropylbenzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,1,2,2-Tetrachloroethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,3-Dichlorobenzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,4-Dichlorobenzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2-Dichlorobenzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2-Dibromo-3-chloropropane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2,4-Trichlorobenzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2,3-Trichlorobenzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |

**Notes:**

Exceeds U.S. Environmental Protection Agency (EPA) Vapor Intrusion Screening Level (VISL) calculator groundwater screening level

Exceeds EPA Maximum Contaminant Level (MCL)

Exceeds both MCL and VISL groundwater screening levels

cis-1,2-Dichloroethene detected above laboratory reporting limit

µg/L = micrograms per liter

U = The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
B = Method blank contamination. The associated method blank contains the target analyte at a reportable level.
J = The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
UJ = The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the action limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
R = The data are unusable. (The compound may or may not be present.)

**TABLE 3**
**ANALYTICAL RESULTS FOR VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER**
**EAST TROY CONTAMINATED AQUIFER**
**FEBRUARY AND MARCH 2013**

| **Sample Location** | MW-EPA-109D-0213 | MW-OEPA-9-0213 | MW-EPA-109S-0213 | TRIPBLANK022713 | MW-OEPA-12-0213 | MW-EPA-110S-0213 | MW-OEPA-13-0213 | MW-EPA-122S-0213 | RBBH0227103 Rinsate Blank | MW-EPA-123D-0213 | MW-EPA-105D-0213 | MW-TROY-N-0213 | MW-EPA-105S-0213 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sample Number** | E3ZQ4 | E3ZQ5 | E3ZQ6 | E3ZQ7 | E3ZQ8 | EXZQ9 | E3ZR0 | E3ZR1 | E3ZR2 | E3ZR3 | E3ZR4 | E3ZR5 | E3ZR6 |
| **Sample Date** | 2/27/2013 | 2/27/2013 | 2/27/2013 | 2/27/2013 | 2/27/2013 | 2/27/2013 | 2/27/2013 | 2/27/2013 | 2/27/2013 | 2/28/2013 | 2/28/2013 | 2/28/2013 | 2/28/2013 |
| **Sample Time** | 1205 | 1358 | 1340 | 1558 | 1502 | 1510 | 1558 | 1615 | 1635 | 1045 | 1150 | 1320 | 1255 |
| **LABORATORY PARAMETERS:** | | | | | | | | | | | | | |
| **Volatile Organic Compounds (VOC) - µg/L** | | | | | | | | | | | | | |
| Dichlorodifluoromethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Chloromethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Vinyl Chloride | 5.0 U | 5.0 U | 5.0 U | 5.0 UJ | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Bromomethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Chloroethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Trichlorofluoromethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,1-Dichloroethene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Acetone | 10 U | 10 U | 10 U | 10 U | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 U |
| Carbon disulfide | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Methyl acetate | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Methylene chloride | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| trans-1,2-Dichloroethene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Methyl tert-Butyl ether | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,1-Dichloroethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| cis-1,2-Dichloroethene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 2-Butanone | 10 U | 10 U | 10 U | 10 U | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 U |
| Bromochloromethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Chloroform | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,1,1-Trichloroethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Cyclohexane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Carbon Tetrachloride | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Benzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2-Dichloroethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,4-Dioxane | 100 R | 100 R | 100 R | 100 R | 100 R | 100 R | 100 R | 100 R | 100 R | 100 R | 100 R | 100 R | 100 R |
| Trichloroethene | 5.0 U | 11 | 4.7 J | 5.0 U | 50 | 3.6 J | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Methylcyclohexane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2-Dichloropropane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Bromodichloromethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| cis-1,3-Dichloropropene | 5.0 UJ | 5.0 UJ | 5.0 UJ | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 UJ | 5.0 U | 5.0 UJ | 5.0 UJ | 5.0 U |
| 4-Methyl-2-pentanone | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Toluene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| trans-1,3-Dichloropropene | 5.0 UJ | 5.0 UJ | 5.0 UJ | 5.0 U | 5.0 UJ | 5.0 U | 5.0 U | 5.0 U | 5.0 UJ | 5.0 U | 5.0 UJ | 5.0 UJ | 5.0 U |
| 1,1,2-Trichloroethane | 5.0 UJ | 5.0 UJ | 5.0 UJ | 5.0 U | 5.0 UJ | 5.0 U | 5.0 U | 5.0 U | 5.0 UJ | 5.0 U | 5.0 UJ | 5.0 UJ | 5.0 U |
| Tetrachloroethene | 5.0 U | 17 | 6.9 | 5.0 U | 42 | 5.5 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 2-Hexanone | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Dibromochloromethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2-Dibromoethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Chlorobenzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Ethylbenzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| o-Xylene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| m,p-Xylene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Styrene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Bromoform | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Isopropylbenzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,1,2,2-Tetrachloroethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,3-Dichlorobenzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,4-Dichlorobenzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2-Dichlorobenzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2-Dibromo-3-chloropropane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2,4-Trichlorobenzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2,3-Trichlorobenzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |

**Notes:**
Exceeds U.S. Environmental Protection Agency (EPA) Vapor Intrusion Screening Level (VISL) calculator groundwater screening level
Exceeds EPA Maximum Contaminant Level (MCL)
Exceeds both MCL and VISL groundwater screening level
cis-1,2-Dichloroethene detected above laboratory reporting limit

µg/L = micrograms per liter

U = The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
B = Method blank contamination. The associated method blank contains the target analyte at a reportable level.
J = The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
UJ = The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the action limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
R = The data are unusable. (The compound may or may not be present.)

**TABLE 3**
**ANALYTICAL RESULTS FOR VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER**
**EAST TROY CONTAMINATED AQUIFER**
**FEBRUARY AND MARCH 2013**

| **Sample Location** | TRIPBLANK022813 | MW-TROY-M-0213 | MW-MCD-T-09-0213 | MW-TROY-L-0213 | MW-TROY-L-0213-DUP | MW-MCD-T-14S-0213 | RBBH22813 Rinsate Blank | RBCT22813 Rinsate Blank | MW-OEPA-11-0313 | MW-EPA-107D-0313 | MW-EPA-107I-0313 | MW-OEPA-4-0313 | RBBH030113 Rinsate Blank |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sample Number** | E3ZR7 | E3ZR8 | E3ZR9 | E3ZS0 | E3ZS1 | E3ZS2 | E3ZS3 | E3ZS4 | E3ZS5 | E3ZS6 | E3ZS7 | E3ZS8 | E3ZS9 |
| **Sample Date** | 2/28/2013 | 2/28/2013 | 2/28/2013 | 2/28/2013 | 2/28/2013 | 2/28/2013 | 2/28/2013 | 2/28/2013 | 3/1/2013 | 3/1/2013 | 3/1/2013 | 3/1/2013 | 3/1/2013 |
| **Sample Time** | 1434 | 1500 | 1518 | 1600 | 1600 | 1610 | 1630 | 1630 | 1024 | 1105 | 1200 | 1152 | 1330 |
| **LABORATORY PARAMETERS:** | | | | | | | | | | | | | |
| **Volatile Organic Compounds (VOC) - µg/L** | | | | | | | | | | | | | |
| Dichlorodifluoromethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Chloromethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Vinyl Chloride | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Bromomethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Chloroethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Trichlorofluoromethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,1-Dichloroethene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 UJ | 5.0 U | 5.0 U |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Acetone | 10 UJ | 10 UJ | 10 UJ | 10 U | 10 U | 10 U | 10 U | 10 U | 10 UJ | 10 U | 10 U | 10 U | 10 U |
| Carbon disulfide | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Methyl acetate | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Methylene chloride | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| trans-1,2-Dichloroethene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 UJ | 5.0 U | 5.0 U |
| Methyl tert-Butyl ether | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,1-Dichloroethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| cis-1,2-Dichloroethene | 5.0 U | 5.0 U | 2.2 J | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 3.5 J | 5.0 U | 5.0 U |
| 2-Butanone | 10 UJ | 10 UJ | 10 UJ | 10 U | 10 U | 10 U | 10 U | 10 U | 10 UJ | 10 U | 10 U | 10 U | 10 U |
| Bromochloromethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Chloroform | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,1,1-Trichloroethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Cyclohexane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Carbon Tetrachloride | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Benzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2-Dichloroethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,4-Dioxane | 100 R | 100 R | 100 R | 100 R | 100 R | 100 R | 100 R | 100 R | 100 R | 100 R | 100 R | 100 R | 100 R |
| Trichloroethene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 9.6 | 5.0 U | 90 | 5.0 U | 5.0 U |
| Methylcyclohexane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2-Dichloropropane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Bromodichloromethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| cis-1,3-Dichloropropene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 4-Methyl-2-pentanone | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Toluene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 2.0 J |
| trans-1,3-Dichloropropene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,1,2-Trichloroethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Tetrachloroethene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 9.1 | 5.0 U | 5.0 U | 180 | 5.0 U | 1300 | 11 | 5.0 U |
| 2-Hexanone | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Dibromochloromethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2-Dibromoethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Chlorobenzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Ethylbenzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| o-Xylene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| m,p-Xylene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Styrene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Bromoform | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Isopropylbenzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,1,2,2-Tetrachloroethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,3-Dichlorobenzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,4-Dichlorobenzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2-Dichlorobenzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2-Dibromo-3-chloropropane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2,4-Trichlorobenzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2,3-Trichlorobenzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |

**Notes:**

Exceeds U.S. Environmental Protection Agency (EPA) Vapor Intrusion Screening Level (VISL) calculator groundwater screening level

Exceeds EPA Maximum Contaminant Level (MCL)

Exceeds both MCL and VISL groundwater screening level

cis-1,2-Dichloroethene detected above laboratory reporting limit

µg/L = micrograms per liter

U = The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
B = Method blank contamination. The associated method blank contains the target analyte at a reportable level.
J = The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
UJ = The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the action limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
R = The data are unusable. (The compound may or may not be present.)

**TABLE 3**
**ANALYTICAL RESULTS FOR VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER**
**EAST TROY CONTAMINATED AQUIFER**
**FEBRUARY AND MARCH 2013**

| **Sample Location** | RBCT030113 Rinsate Blank | MW-OEPA-2-0313 | MW-OEPA-7-0313 | TRIPBLANK030113 | MW-EPA-108S-0313 | MW-EPA-119I-0313 | MW-EPA-104I-0313 | MW-EPA-103S-0313 | MW-EPA-101S-0313 | MW-EPA-104D-0313 | MW-EPA-100S-0313 | MW-EPA-100S-0313-DUP | MW-EPA-120S-0313 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sample Number** | E3ZT0 | E3ZT1 | E3ZT2 | E3ZT3 | E3ZT4 | E3ZT5 | E3ZT6 | E3ZT7 | E3ZT8 | E3ZT9 | E3ZW0 | E3ZW1 | E3ZW2 |
| **Sample Date** | 3/1/2013 | 3/1/2013 | 3/1/2013 | 3/1/2013 | 3/4/2013 | 3/4/2013 | 3/4/2013 | 3/4/2013 | 3/4/2013 | 3/4/2013 | 3/4/2013 | 3/4/2013 | 3/4/2013 |
| **Sample Time** | 1332 | 1442 | 1450 | 1538 | 1055 | 1130 | 1229 | 1310 | 1430 | 1445 | 1605 | 1605 | 1618 |
| **LABORATORY PARAMETERS:** | | | | | | | | | | | | | |
| **Volatile Organic Compounds (VOC) - µg/L** | | | | | | | | | | | | | |
| Dichlorodifluoromethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Chloromethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Vinyl Chloride | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Bromomethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Chloroethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Trichlorofluoromethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,1-Dichloroethene | 5.0 U | 5.0 U | 5.0 UJ | 5.0 U | 5.0 U | 5.0 UJ | 5.0 U | 5.0 U | 5.0 UJ | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Acetone | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Carbon disulfide | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Methyl acetate | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Methylene chloride | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| trans-1,2-Dichloroethene | 5.0 U | 5.0 U | 5.0 UJ | 5.0 U | 5.0 U | 5.0 UJ | 5.0 U | 5.0 U | 5.0 UJ | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Methyl tert-Butyl ether | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,1-Dichloroethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| cis-1,2-Dichloroethene | 5.0 U | 5.0 U | 5.0 UJ | 5.0 U | 5.0 U | 5.0 UJ | 5.0 U | 5.0 U | 5.0 UJ | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 2-Butanone | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Bromochloromethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Chloroform | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 1.5 J | 5.0 U | 5.0 U |
| 1,1,1-Trichloroethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Cyclohexane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Carbon Tetrachloride | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Benzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2-Dichloroethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,4-Dioxane | 100 R | 100 R | 100 R | 100 R | 100 R | 100 R | 100 R | 100 R | 100 R | 100 R | 100 R | 100 R | 100 R |
| Trichloroethene | 5.0 U | 5.0 U | 9.4 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Methylcyclohexane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2-Dichloropropane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Bromodichloromethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| cis-1,3-Dichloropropene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 4-Methyl-2-pentanone | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Toluene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 2.7 J | 5.0 U | 2.3 J | 5.0 U | 5.0 U | 5.0 U |
| trans-1,3-Dichloropropene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,1,2-Trichloroethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Tetrachloroethene | 5.0 U | 5.0 U | 660 | 5.0 U | 5.0 U | 77 | 5.0 U | 19 | 470 | 5.0 U | 21 | 22 | 2.9 J |
| 2-Hexanone | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Dibromochloromethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2-Dibromoethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Chlorobenzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Ethylbenzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| o-Xylene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| m,p-Xylene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Styrene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Bromoform | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Isopropylbenzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,1,2,2-Tetrachloroethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,3-Dichlorobenzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,4-Dichlorobenzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2-Dichlorobenzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2-Dibromo-3-chloropropane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2,4-Trichlorobenzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2,3-Trichlorobenzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |

**Notes:**

Exceeds U.S. Environmental Protection Agency (EPA) Vapor Intrusion Screening Level (VISL) calculator groundwater screening level

Exceeds EPA Maximum Contaminant Level (MCL)

Exceeds both MCL and VISL groundwater screening level

cis-1,2-Dichloroethene detected above laboratory reporting limit

µg/L = micrograms per liter

U = The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
B = Method blank contamination. The associated method blank contains the target analyte at a reportable level.
J = The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
UJ = The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the action limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
R = The data are unusable. (The compound may or may not be present.)

**TABLE 3**
**ANALYTICAL RESULTS FOR VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER**
**EAST TROY CONTAMINATED AQUIFER**
**FEBRUARY AND MARCH 2013**

| **Sample Location** | RBBH030413 Rinsate Blank | RBCT030413 Rinsate Blank | TRIPBLANK030513 | MW-EPA-115S-0313 | MW-EPA-1155-0313-DUP | MW-EPA-118S-0313 | MW-EPA-116S-0313 | MW-TROY-P-0313 | MW-EPA-117S-0313 | MW-EPA-106S-0313 | MW-EPA-106S-0313-DUP | MW-OEPA-6-0313 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sample Number** | E3ZW3 | E3ZW4 | E3ZW5 | E3ZW6 | E3ZX6 | E3ZW7 | E3ZW8 | E3ZW9 | E3ZX0 | E3ZX1 | E3ZX2 | E3ZX3 |
| **Sample Date** | 3/4/2013 | 3/4/2013 | 3/5/2013 | 3/5/2013 | 3/5/2013 | 3/5/2013 | 3/5/2013 | 3/5/2013 | 3/5/2013 | 3/5/2013 | 3/5/2013 | 3/5/2013 |
| **Sample Time** | 1635 | 1640 | 1028 | 1100 | 1100 | 1118 | 1220 | 1442 | 1445 | 1553 | 1553 | 1610 |
| **LABORATORY PARAMETERS:** | | | | | | | | | | | | |
| **Volatile Organic Compounds (VOC) - µg/L** | | | | | | | | | | | | |
| Dichlorodifluoromethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Chloromethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Vinyl Chloride | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Bromomethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Chloroethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Trichlorofluoromethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,1-Dichloroethene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Acetone | 10 U | 10 U | 10 U | 10 U | 10 U | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 R | 10 UJ |
| Carbon disulfide | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Methyl acetate | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Methylene chloride | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| trans-1,2-Dichloroethene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Methyl tert-Butyl ether | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,1-Dichloroethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| cis-1,2-Dichloroethene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 2-Butanone | 10 U | 10 U | 10 U | 10 U | 10 U | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 UJ | 10 R | 10 UJ |
| Bromochloromethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Chloroform | 5.0 U | 5.0 U | 5.0 U | 14 | 14 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,1,1-Trichloroethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Cyclohexane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Carbon Tetrachloride | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Benzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2-Dichloroethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,4-Dioxane | 100 R | 100 R | 100 R | 100 R | 100 R | 100 R | 100 R | 100 R | 100 R | 100 R | 100 R | 100 R |
| Trichloroethene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 3.5 J |
| Methylcyclohexane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2-Dichloropropane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Bromodichloromethane | 5.0 U | 5.0 U | 5.0 U | 5.9 | 6.6 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| cis-1,3-Dichloropropene | 5.0 U | 5.0 U | 5.0 U | 5.0 UJ | 5.0 U | 5.0 UJ | 5.0 UJ | 5.0 UJ | 5.0 UJ | 5.0 UJ | 5.0 UJ | 5.0 UJ |
| 4-Methyl-2-pentanone | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Toluene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| trans-1,3-Dichloropropene | 5.0 U | 5.0 U | 5.0 U | 5.0 UJ | 5.0 U | 5.0 UJ | 5.0 UJ | 5.0 UJ | 5.0 UJ | 5.0 UJ | 5.0 UJ | 5.0 UJ |
| 1,1,2-Trichloroethane | 5.0 U | 5.0 U | 5.0 U | 5.0 UJ | 5.0 U | 5.0 UJ | 5.0 UJ | 5.0 UJ | 5.0 UJ | 5.0 UJ | 5.0 UJ | 5.0 UJ |
| Tetrachloroethene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 65 | 5.0 U | 50 | 16 | 17 | 650 |
| 2-Hexanone | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Dibromochloromethane | 5.0 U | 5.0 U | 5.0 U | 4.7 J | 4.8 J | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2-Dibromoethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Chlorobenzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Ethylbenzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| o-Xylene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| m,p-Xylene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Styrene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Bromoform | 5.0 U | 5.0 U | 5.0 U | 1.7 J | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Isopropylbenzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,1,2,2-Tetrachloroethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,3-Dichlorobenzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,4-Dichlorobenzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2-Dichlorobenzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2-Dibromo-3-chloropropane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2,4-Trichlorobenzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2,3-Trichlorobenzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |

**Notes:**

Exceeds U.S. Environmental Protection Agency (EPA) Vapor Intrusion Screening Level (VISL) calculator groundwater screening level

Exceeds EPA Maximum Contaminant Level (MCL)

Exceeds both MCL and VISL groundwater screening level

cis-1,2-Dichloroethene detected above laboratory reporting limit

µg/L = micrograms per liter

U = The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
B = Method blank contamination. The associated method blank contains the target analyte at a reportable level.
J = The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
UJ = The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the action limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
R = The data are unusable. (The compound may or may not be present.)

**TABLE 3**
**ANALYTICAL RESULTS FOR VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER**
**EAST TROY CONTAMINATED AQUIFER**
**FEBRUARY AND MARCH 2013**

| **Sample Location** | RBCT030513 Rinsate Blank | RBBH030513 Rinsate Blank | MW-EPA-102S-0313 | MW-TROY-O-0313 | MW-EPA-106D-0313 | MW-EPA-106D-0313-DUP | MW-OEPA-1-0313 | MW-TROY-Q-0313 | RBCT030613 Rinsate Blank | RBBH030613 Rinsate Blank | TRIPBLANK030613 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sample Number** | E3ZX4 | E3ZX5 | E3ZX7 | E3ZX8 | E3XZ9 | E3ZY0 | E3ZY1 | E3ZY2 | E3ZY3 | E3ZY4 | E3YZ5 |
| **Sample Date** | 3/5/2013 | 3/5/2013 | 3/6/2013 | 3/6/2013 | 3/6/2013 | 3/6/2013 | 3/6/2013 | 3/6/2013 | 3/6/2013 | 3/6/2013 | 3/6/2013 |
| **Sample Time** | 1630 | 1635 | 1135 | 1537 | 1242 | 1242 | 1530 | 1415 | 1605 | 1600 | 1603 |
| **LABORATORY PARAMETERS:** | | | | | | | | | | | |
| **Volatile Organic Compounds (VOC) - µg/L** | | | | | | | | | | | |
| Dichlorodifluoromethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Chloromethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Vinyl Chloride | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Bromomethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Chloroethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Trichlorofluoromethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,1-Dichloroethene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Acetone | 10 UJ | 10 U | 10 UJ | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Carbon disulfide | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Methyl acetate | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Methylene chloride | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| trans-1,2-Dichloroethene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Methyl tert-Butyl ether | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,1-Dichloroethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| cis-1,2-Dichloroethene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 2-Butanone | 10 UJ | 10 U | 10 UJ | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Bromochloromethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Chloroform | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,1,1-Trichloroethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Cyclohexane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Carbon Tetrachloride | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Benzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2-Dichloroethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,4-Dioxane | 100 R | 100 R | 100 R | 100 R | 100 R | 100 R | 100 R | 100 R | 100 R | 100 R | 100 R |
| Trichloroethene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 4.4 J | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Methylcyclohexane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2-Dichloropropane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Bromodichloromethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| cis-1,3-Dichloropropene | 5.0 UJ | 5.0 U | 5.0 UJ | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 UJ |
| 4-Methyl-2-pentanone | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Toluene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| trans-1,3-Dichloropropene | 5.0 UJ | 5.0 U | 5.0 UJ | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 UJ |
| 1,1,2-Trichloroethane | 5.0 UJ | 5.0 U | 5.0 UJ | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 UJ |
| Tetrachloroethene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 350 | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 2-Hexanone | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Dibromochloromethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2-Dibromoethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Chlorobenzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Ethylbenzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| o-Xylene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| m,p-Xylene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Styrene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Bromoform | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| Isopropylbenzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,1,2,2-Tetrachloroethane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,3-Dichlorobenzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,4-Dichlorobenzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2-Dichlorobenzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2-Dibromo-3-chloropropane | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2,4-Trichlorobenzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| 1,2,3-Trichlorobenzene | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |

**Notes:**

Exceeds U.S. Environmental Protection Agency (EPA) Vapor Intrusion Screening Level (VISL) calculator groundwater screening level

Exceeds EPA Maximum Contaminant Level (MCL)

Exceeds both MCL and VISL groundwater screening level

cis-1,2-Dichloroethene detected above laboratory reporting limit

µg/L = micrograms per liter

U = The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
B = Method blank contamination. The associated method blank contains the target analyte at a reportable level.
J = The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
UJ = The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the action limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
R = The data are unusable. (The compound may or may not be present.)

**TABLE 4**
**SCREENING-LEVEL ANALYTICAL RESULTS FOR GROUNDWATER IN SHALLOW SOIL BORINGS AND VERTICAL AQUIFER SAMPLING PROGRAMS**
**EAST TROY CONTAMINATED AQUIFER**
**DECEMBER 2012 AND FEBRUARY 2013**

| Sample Location | BW014-MAI-20-1212 | BW012-WIL-15-1212 | BW011-MAI-15-1212 | BW009-COV-16-1212 | BW010-COV-15-1212 | BW008-NEW-15-1212 | BW006-CRA-17-1212 | EB-001-1212 | TRIP BLANK | BW002-MAI-19-1212 | BW001-WAL-18-1212 | BW004-MUL-16-1212 | BW004-MUL-16-1212-DUP | BW005-MUL-15-1212 | BW003-MAI-19-1212 | BW007-CRA-15-1212 | BW013-MCD-11-1212 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location Description | South side of East Main St.; mid-way between East Franklin and Floral Ave. | East side of Williams St. between East Franklin and East Canal St. | North side of East Main St. between Williams and Frank St. | East side of South Counts St. between East Franklin and East Canal St. | East side of South Counts St. between East Main and East Franklin St. | West curb of New St. between East Main and East Water St. | West side of South Crawford St. mid-way between monitoring wells OEPA-6 and OEPA-2 | Equipment/field blank collected form peristaltic pump dishcarge line | Trip blank sample that accompanied field samples in cooler | Parking space on South side of East Main St., in front of the First Presbyterian Church addition | West side of South Walnut St. across the street from monitoring wells OEPA-11, EPA 107I and 107D | West side of South Walnut St. across the street from monitoring wells OEPA-11, EPA107I and 107D | West side of South Walnut St. across the street from monitoring wells OEPA-11, EPA107I and 107D | South Mulberry St. just South of East Franklin | West curb of North Mulberry St. at intersection with East Main St. | South Crawford St. approx. 150-ft. South of the East Franklin intersection | Base of the Great Miami River levee on Miami Conservancy District property approx. 300-ft. East/downstream from the northern terminus of Williams St. |
| Sample Date | 12/17/2012 | 12/17/2012 | 12/17/2012 | 12/17/2012 | 12/17/2012 | 12/17/2012 | 12/17/2012 | 12/17/2012 | 12/17/2012 | 12/19/2012 | 12/19/2012 | 12/19/2012 | 12/19/2012 | 12/19/2012 | 12/19/2012 | 12/19/2012 | 12/19/2012 |
| Sample Time | 1310 | 1550 | 1455 | 940 | 1045 | 1135 | 1345 | 1530 | | 957 | 1100 | 1200 | 1200 | 1335 | 1445 | 1530 | 1650 |
| **Volatile Organic Compound (VOC)** | | Dilution Factor | | | Dilution Factor | | | | | | | Dilution Factor | Dilution Factor | | | | |
| **µg/L** | | 2 | | | 10 | | | | | | | 10 | 10 | | | | |
| Acetone | <10.0 | <20.0 | <10.0 | <10.0 | <100 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <100 | <100 | <10.0 | <10.0 | <10.0 | <10.0 |
| Benzene | <1.00 | <2.00 | <1.00 | <1.00 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <10.0 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 |
| Dichlorobromomethane | <1.00 | <2.00 | <1.00 | <1.00 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <10.0 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 |
| Bromoform | <1.00 | <2.00 | <1.00 | <1.00 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <10.0 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 |
| Bromomethane | <1.00 | <2.00 | <1.00 | <1.00 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <10.0 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 |
| 2-Butanone (MEK) | <10.0 | <20.0 | <10.0 | <10.0 | <100 | <10.0 | <10.0 | 16.2 | <1.00 | <10.0 | <10.0 | <100 | <100 | <10.0 | <10.0 | <10.0 | <10.0 |
| Carbon disulfide | <1.00 | <2.00 | <1.00 | <1.00 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <10.0 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 |
| Carbon tetrachloride | <1.00 | <2.00 | <1.00 | <1.00 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <10.0 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 |
| Chlorobenzene | <1.00 | <2.00 | <1.00 | <1.00 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <10.0 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 |
| Chloroethane | <1.00 | <2.00 | <1.00 | <1.00 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <10.0 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 |
| Chloroform | <1.00 | <2.00 | 10.5 | <1.00 | <10.0 | 1.74 | 2.24 | <1.00 | <1.00 | 4.14 | <1.00 | <10.0 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 |
| Chloromethane | <1.00 | <2.00 | <1.00 | <1.00 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <10.0 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 |
| 1,1-Dichloroethane | <1.00 | <2.00 | <1.00 | <1.00 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <10.0 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 |
| 1,2-Dichloroethane | <1.00 | <2.00 | <1.00 | <1.00 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <10.0 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 |
| 1,1-Dichloroethene | <1.00 | <2.00 | <1.00 | <1.00 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <10.0 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 |
| 1,2-Dichloropropane | <1.00 | <2.00 | <1.00 | <1.00 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <10.0 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 |
| cis-1,3-Dichloropropene | <1.00 | <2.00 | <1.00 | <1.00 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <10.0 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 |
| trans-1,3-Dichloropropene | <1.00 | <2.00 | <1.00 | <1.00 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <10.0 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 |
| Ethylbenzene | <1.00 | <2.00 | <1.00 | <1.00 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <10.0 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 |
| 2-Hexanone | <10.0 | <20.0 | <10.0 | <10.0 | <100 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <100 | <100 | <10.0 | <10.0 | <10.0 | <10.0 |
| Methylene Chloride | <1.00 | <2.00 | <1.00 | <1.00 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <10.0 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 |
| 4-Methyl-2-pentanone (MIBK) | <10.0 | <20.0 | <10.0 | <10.0 | <100 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <100 | <100 | <10.0 | <10.0 | <10.0 | <10.0 |
| Styrene | <1.00 | <2.00 | <1.00 | <1.00 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <10.0 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 |
| 1,1,2,2-Tetrachloroethane | <1.00 | <2.00 | <1.00 | <1.00 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <10.0 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 |
| Tetrachloroethene | <1.00 | 47.6 | <1.00 | 4.05 | 224 | 6.64 | 2.78 | <1.00 | <1.00 | <1.00 | 11.4 | 238 | 249 | <1.00 | <1.00 | 3.46 | <1.00 |
| Toluene | <1.00 | <2.00 | <1.00 | <1.00 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <10.0 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 |
| Trichloroethene | <1.00 | <2.00 | <1.00 | <1.00 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <10.0 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 |
| Vinyl chloride | <1.00 | <2.00 | <1.00 | <1.00 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <10.0 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 |
| Xylenes, Total | <2.00 | <4.00 | <2.00 | <2.00 | <20.0 | <2.00 | <2.00 | <2.00 | <2.00 | <2.00 | <2.00 | <20.0 | <20.0 | <2.00 | <2.00 | <2.00 | <2.00 |
| 1,1,1-Trichloroethane | <1.00 | <2.00 | <1.00 | <1.00 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <10.0 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 |
| 1,1,2-Trichloroethane | <1.00 | <2.00 | <1.00 | <1.00 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <10.0 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 |
| Cyclohexane | <1.00 | <2.00 | <1.00 | <1.00 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <10.0 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 |
| 1,2-Dibromo-3-Chloropropane | <2.00 | <4.00 | <2.00 | <2.00 | <20.0 | <2.00 | <2.00 | <2.00 | <2.00 | <2.00 | <2.00 | <20.0 | <20.0 | <2.00 | <2.00 | <2.00 | <2.00 |
| Ethylene Dibromide | <1.00 | <2.00 | <1.00 | <1.00 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <10.0 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 |
| Dichlorodifluoromethane | <1.00 | <2.00 | <1.00 | <1.00 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <10.0 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 |
| cis-1,2-Dichloroethene | <1.00 | <2.00 | <1.00 | <1.00 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <10.0 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 |
| trans-1,2-Dichloroethene | <1.00 | <2.00 | <1.00 | <1.00 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <10.0 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 |
| Isopropylbenzene | <1.00 | <2.00 | <1.00 | <1.00 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <10.0 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 |
| Methyl acetate | <10.0 | <20.0 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <100 | <100 | <10.0 | <10.0 | <10.0 | <10.0 |
| Methyl tert-butyl ether | <5.00 | <10.0 | <5.00 | <5.00 | <50.0 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <50.0 | <50.0 | <5.00 | <5.00 | <5.00 | <5.00 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | <1.00 | <2.00 | <1.00 | <1.00 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <10.0 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 |
| 1,2,4-Trichlorobenzene | <1.00 | <2.00 | <1.00 | <1.00 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <10.0 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 |
| 1,2-Dichlorobenzene | <1.00 | <2.00 | <1.00 | <1.00 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <10.0 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 |
| 1,3-Dichlorobenzene | <1.00 | <2.00 | <1.00 | <1.00 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <10.0 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 |
| 1,4-Dichlorobenzene | <1.00 | <2.00 | <1.00 | <1.00 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <10.0 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 |
| Trichlorofluoromethane | <1.00 | <2.00 | <1.00 | <1.00 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <10.0 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 |
| Chlorodibromomethane | <1.00 | <2.00 | <1.00 | <1.00 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <10.0 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 |
| Methylcyclohexane | <1.00 | <2.00 | <1.00 | <1.00 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <10.0 | <10.0 | <1.00 | <1.00 | <1.00 | <1.00 |

**Notes:**
Exceeds U.S. Environmental Protection Agency (EPA) Vapor Intrusion Screening Level (VISL) calculator groundwater screening level
Exceeds EPA Maximum Contaminant Level (MCL)
Exceeds both MCL and VISL groundwater screening level
Detected above laboratory reporting limit
µg/L = Micrograms per Liter
Groundwater samples were collected in Geoprobe borings at first observed groundwater, between 11 and 20 feet below ground surface.

**TABLE 4**
**SCREENING-LEVEL ANALYTICAL RESULTS FOR GROUNDWATER IN SHALLOW SOIL BORINGS AND VERTICAL AQUIFER SAMPLING PROGRAMS**
**EAST TROY CONTAMINATED AQUIFER**
**DECEMBER 2012 AND FEBRUARY 2013**

| Sample Location | FLO-1-18-0213 | FLO-2-16-0213 | FRA-1-12-0213 | MOR-1-20-0213 | WAL-1-20-0213 | EB-1-12-0213 | TRIP BLANK | WAL-2-20-0213 | BW-012-WAT-15-0213 | BW013-WAT-12-0213 | MAI-1-20-0213 | BW014-SPN-20-0213 | EB-13-0213 | TRIP BLANK | BW017-SPN-14-0213 | BW018-SPN-14-0213 | BW021-SPN-14-0213 | EB3-14-0213 | TRIP BLANK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location Description | N side of the intersection of Canal and Floral | Floral Ave approximately 400 ft SW of Canal Street | Corner of Franklin and Morehead | W side of Morehead N of intersection w/ Scott | SW corner of Walnut and Franklin | Equipment Blank | Trip Blank | E Side of Walnut St 50 ft S of E Main St | Vacant lot between 423 & 413 E Water St | Backyard of 423 E Water St | S side of Main St in front of Cabinet Shop | Eastern end of Spinnaker Parking lot | Equipment Blank | Trip Blank | NW corner of Spinnaker building | NW corner of Spinnaker building | NW corner of Spinnaker building | Equipment Blank | Trip Blank |
| Sample Date | 2/12/2013 | 2/12/2013 | 2/12/2013 | 2/12/2013 | 2/12/2013 | 2/12/2013 | 2/12/2013 | 2/13/2013 | 2/13/2013 | 2/13/2013 | 2/13/2013 | 2/13/2013 | 2/13/2013 | 2/13/2013 | 2/14/2013 | 2/14/2013 | 2/14/2013 | 2/14/2013 | 2/14/2013 |
| Sample Time | 1040 | 1140 | 1315 | 1430 | 1635 | 1645 | | 945 | 1345 | 1420 | 1535 | 1540 | 1700 | | 1035 | 1145 | 1430 | 1700 | |
| **Volatile Organic Compound (VOC)** | | | | | Dilution Factor | | | Dilution Factor | | | | | | | Dilution Factor | | | | |
| **µg/L** | | | | | 6.67 | | | 1.67 | | | | | | | 1.67 | | | | |
| Acetone | <10.0 | <10.0 | <10.0 | <10.0 | <66.7 | <10.0 | <10.0 | <16.7 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <16.7 | <10.0 | <10.0 | <10.0 | 10.0 |
| Benzene | <1.0 | <1.0 | <1.0 | <1.0 | <6.67 | <1.0 | <1.0 | <1.67 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.67 | <1.0 | <1.0 | <1.0 | <1.0 |
| Dichlorobromomethane | <1.0 | <1.0 | <1.0 | <1.0 | <6.67 | <1.0 | <1.0 | <1.67 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.67 | <1.0 | <1.0 | <1.0 | <1.0 |
| Bromoform | <1.0 | <1.0 | <1.0 | <1.0 | <6.67 | <1.0 | <1.0 | <1.67 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.67 | <1.0 | <1.0 | <1.0 | <1.0 |
| Bromomethane | <1.0 | <1.0 | <1.0 | <1.0 | <6.67 | <1.0 | <1.0 | <1.67 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.67 | <1.0 | <1.0 | <1.0 | <1.0 |
| 2-Butanone (MEK) | <10.0 | <10.0 | <10.0 | <10.0 | <66.7 | <10.0 | <10.0 | <16.7 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <16.7 | <10.0 | <10.0 | <10.0 | <10.0 |
| Carbon disulfide | <1.00 | <1.00 | <1.00 | <1.00 | <6.67 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 |
| Carbon tetrachloride | <1.00 | <1.00 | <1.00 | <1.00 | <6.67 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 |
| Chlorobenzene | <1.00 | <1.00 | <1.00 | <1.00 | <6.67 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 |
| Chloroethane | <1.00 | <1.00 | <1.00 | <1.00 | <6.67 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 |
| Chloroform | <1.00 | <1.00 | <1.00 | <1.00 | <6.67 | <1.00 | <1.00 | <1.67 | <1.00 | 2.73 | <1.00 | <1.00 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 |
| Chloromethane | <1.00 | <1.00 | <1.00 | <1.00 | <6.67 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 |
| 1,1-Dichloroethane | <1.00 | <1.00 | <1.00 | <1.00 | <6.67 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 |
| 1,2-Dichloroethane | <1.00 | <1.00 | <1.00 | <1.00 | <6.67 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 |
| 1,1-Dichloroethene | <1.00 | <1.00 | <1.00 | <1.00 | <6.67 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 |
| 1,2-Dichloropropane | <1.00 | <1.00 | <1.00 | <1.00 | <6.67 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 |
| cis-1,3-Dichloropropene | <1.00 | <1.00 | <1.00 | <1.00 | <6.67 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 |
| trans-1,3-Dichloropropene | <1.00 | <1.00 | <1.00 | <1.00 | <6.67 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 |
| Ethylbenzene | <1.00 | <1.00 | <1.00 | <1.00 | <6.67 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 |
| 2-Hexanone | <10.0 | <10.0 | <10.0 | <10.0 | <66.7 | <10.0 | <10.0 | <16.7 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <16.7 | <10.0 | <10.0 | <10.0 | <10.0 |
| Methylene Chloride | <1.00 | <1.00 | <1.00 | <1.00 | <6.67 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 |
| 4-Methyl-2-pentanone (MIBK) | <10.0 | <10.0 | <10.0 | <10.0 | <66.7 | <10.0 | <10.0 | <16.7 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <16.7 | <10.0 | <10.0 | <10.0 | <10.0 |
| Styrene | <1.00 | <1.00 | <1.00 | <1.00 | <6.67 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 |
| 1,1,2,2-Tetrachloroethane | <1.00 | <1.00 | <1.00 | <1.00 | <6.67 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 |
| Tetrachloroethene | 1.77 | <1.00 | <1.00 | <1.00 | 186 | <1.00 | <1.00 | 56.7 | 3.32 | 18.9 | <1.00 | 4.48 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 |
| Toluene | <1.00 | <1.00 | <1.00 | <1.00 | <6.67 | <1.00 | <1.00 | <1.67 | <1.00 | 1.15 | <1.00 | <1.00 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 |
| Trichloroethene | <1.00 | <1.00 | <1.00 | <1.00 | <6.67 | <1.00 | <1.00 | <1.67 | 1.83 | 1.47 | <1.00 | 3.12 | <1.00 | <1.00 | 39.0 | <1.00 | 4.64 | <1.00 | <1.00 |
| Vinyl chloride | <1.00 | <1.00 | <1.00 | <1.00 | <6.67 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 |
| Xylenes, Total | <2.00 | <2.00 | <2.00 | <2.00 | <13.3 | <2.00 | <2.00 | <3.33 | <2.00 | <2.00 | <2.00 | <2.00 | <2.00 | <2.00 | <3.33 | <2.00 | <2.00 | <2.00 | <2.00 |
| 1,1,1-Trichloroethane | <1.00 | <1.00 | <1.00 | <1.00 | <6.67 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 |
| 1,1,2-Trichloroethane | <1.00 | <1.00 | <1.00 | <1.00 | <6.67 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 |
| Cyclohexane | <1.00 | <1.00 | <1.00 | <1.00 | <6.67 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 |
| 1,2-Dibromo-3-Chloropropane | <2.00 | <2.00 | <2.00 | <2.00 | <13.3 | <2.00 | <2.00 | <3.33 | <2.00 | <2.00 | <2.00 | <2.00 | <2.00 | <2.00 | <3.33 | <2.00 | <2.00 | <2.00 | <2.00 |
| Ethylene Dibromide | <1.00 | <1.00 | <1.00 | <1.00 | <6.67 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 |
| Dichlorodifluoromethane | <1.00 | <1.00 | <1.00 | <1.00 | <6.67 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 |
| cis-1,2-Dichloroethene | <1.00 | <1.00 | <1.00 | <1.00 | <6.67 | <1.00 | <1.00 | <1.67 | 24.6 | <1.00 | <1.00 | 2.29 | <1.00 | <1.00 | 5.60 | 4.37 | 2.16 | <1.00 | <1.00 |
| trans-1,2-Dichloroethene | <1.00 | <1.00 | <1.00 | <1.00 | <6.67 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 |
| Isopropylbenzene | <1.00 | <1.00 | <1.00 | <1.00 | <6.67 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 |
| Methyl acetate | <10.0 | <10.0 | <10.0 | <10.0 | <66.7 | <10.0 | <10.0 | <16.7 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <16.7 | <10.0 | <10.0 | <10.0 | <10.0 |
| Methyl tert-butyl ether | <5.00 | <5.00 | <5.00 | <5.00 | <33.3 | <5.00 | <5.00 | <8.34 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <8.34 | <5.00 | <5.00 | <5.00 | <5.00 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | <1.00 | <1.00 | <1.00 | <1.00 | <6.67 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 |
| 1,2,4-Trichlorobenzene | <1.00 | <1.00 | <1.00 | <1.00 | <6.67 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 |
| 1,2-Dichlorobenzene | <1.00 | <1.00 | <1.00 | <1.00 | <6.67 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 |
| 1,3-Dichlorobenzene | <1.00 | <1.00 | <1.00 | <1.00 | <6.67 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 |
| 1,4-Dichlorobenzene | <1.00 | <1.00 | <1.00 | <1.00 | <6.67 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 |
| Trichlorofluoromethane | <1.00 | <1.00 | <1.00 | <1.00 | <6.67 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 |
| Chlorodibromomethane | <1.00 | <1.00 | <1.00 | <1.00 | <6.67 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 |
| Methylcyclohexane | <1.00 | <1.00 | <1.00 | <1.00 | <6.67 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.67 | <1.00 | <1.00 | <1.00 | <1.00 |

**Notes:**
Exceeds U.S. Environmental Protection Agency (EPA) Vapor Intrusion Screening Level (VISL) calculator groundwater screening level
Exceeds EPA Maximum Contaminant Level (MCL)
Exceeds both MCL and VISL groundwater screening level
cis-1,2-Dichloroethene detected above laboratory reporting limit
µg/L = Micrograms per Liter
Groundwater samples were collected in Geoprobe borings at first observed groundwater, generally between 11 and 20 feet below ground surface.

**TABLE 4**
**SCREENING-LEVEL ANALYTICAL RESULTS FOR GROUNDWATER IN SHALLOW SOIL BORINGS AND VERTICAL AQUIFER SAMPLING PROGRAMS**
**EAST TROY CONTAMINATED AQUIFER**
**DECEMBER 2012 AND FEBRUARY 2013**

| Sample Location | VAS-208-05-0113 | VAS-208-27-0113 | VAS-208-60-0113 | VAS-209-25-0113 | VAS-209-50-0113 | VAS-209-51-0113 | VAS-209-75-0113 | VAS-209-105-0113 | VAS-210-25-0113 | VAS-210-50-0113 | VAS-210-70-0113 | VAS-210-110-0113 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location Description | Rutherford Dr about 500 feet NW of golf course parking lot | | | East side of River on Bike trail approx 500 feet SE from parking lot | | | | | Terminus of Rutherford Dr at Golf course parking lot | | | |
| Sample Date | 1/14/2013 | 1/14/2013 | 1/14/2013 | 1/15/2013 | 1/15/2013 | 1/15/2013 | 1/16/2013 | 1/16/2013 | 1/16/2013 | 1/16/2013 | 1/17/2013 | 1/17/2013 |
| Sample Time | 1130 | 1345 | 1535 | 1430 | 1645 | 1645 | 1005 | 1220 | 1545 | 1700 | 1045 | 1315 |
| **Volatile Organic Compound (VOC)** | | | | | | | | | | | | |
| **µg/L** | | | | | | | | | | | | |
| Acetone | 11.0 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 |
| Benzene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Dichlorobromomethane | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Bromoform | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Bromomethane | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| 2-Butanone (MEK) | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 |
| Carbon disulfide | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Carbon tetrachloride | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Chlorobenzene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Chloroethane | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Chloroform | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Chloromethane | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| 1,1-Dichloroethane | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| 1,2-Dichloroethane | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| 1,1-Dichloroethene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| 1,2-Dichloropropane | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| cis-1,3-Dichloropropene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| trans-1,3-Dichloropropene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Ethylbenzene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| 2-Hexanone | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 |
| Methylene Chloride | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| 4-Methyl-2-pentanone (MIBK) | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 |
| Styrene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| 1,1,2,2-Tetrachloroethane | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Tetrachloroethene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Toluene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Trichloroethene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Vinyl chloride | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Xylenes, Total | <2.00 | <2.00 | <2.00 | <2.00 | <2.00 | <2.00 | <2.00 | <2.00 | <2.00 | <2.00 | <2.00 | <2.00 |
| 1,1,1-Trichloroethane | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| 1,1,2-Trichloroethane | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Cyclohexane | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| 1,2-Dibromo-3-Chloropropane | <2.00 | <2.00 | <2.00 | <2.00 | <2.00 | <2.00 | <2.00 | <2.00 | <2.00 | <2.00 | <2.00 | <2.00 |
| Ethylene Dibromide | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Dichlorodifluoromethane | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| cis-1,2-Dichloroethene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | 1.69 | 3.19 | <1.00 | <1.00 | <1.00 | <1.00 |
| trans-1,2-Dichloroethene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Isopropylbenzene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Methyl acetate | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 |
| Methyl tert-butyl ether | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 | <5.00 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| 1,2,4-Trichlorobenzene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| 1,2-Dichlorobenzene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| 1,3-Dichlorobenzene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| 1,4-Dichlorobenzene | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Trichlorofluoromethane | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Chlorodibromomethane | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Methylcyclohexane | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |

**Notes:**
Exceeds U.S. Environmental Protection Agency (EPA) Vapor Intrusion Screening Level (VISL) calculator groundwater screening level
Exceeds EPA Maximum Contaminant Level (MCL)
Exceeds both MCL and VISL groundwater screening level
cis-1,2-Dichloroethene detected above laboratory reporting limit
µg/L = Micrograms per Liter
Groundwater samples were collected in Geoprobe borings at first observed groundwater, generally between 11 and 20 feet below ground surface.

**TABLE 5**

**ANALYTICAL RESULTS FOR VOLATILE ORGANIC COMPOUNDS IN VAPOR INTRUSION SAMPLES**
**AUGUST 2012 AND APRIL - MAY 2013**

| Sample Location: | 1 | | | | | | | | | | | | | | 6 | | | | | | | | | | 8 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Property Use: | Commercial | | | | | | | | | | | | | | Residential | | | | | | | | | | Residential | | | | | |
| Field Sample ID: | IA-001-1-0812 | | IA-001D-1-0812 | | IA-002-1-0812 | | SS-001-1-0812 | | SS-001D-1-0812 | | SS-002-1-0812 | | SS-003-1-0812 | | AA-001-6-0812 | | IA-001-6-0812 | | IA-001-6D-0812 | | SS-001-6-0812 | | SS-001-6D-0812 | | SS-002-6-0812 | | IA-002-008-0812 | | IA-003-008-0812 | | IA-001-008-0812 | |
| Lab Sample ID: | 1208725-06A | | 1208725-02A | | 1208725-04A | | 1208725-01A | | 1208725-07A | | 1208725-03A | | 1208725-05A | | 1209002-06A | | 1209002-02A | | 1209002-03A | | 1209002-01A | | 1209002-04A | | 1209002-05A | | 1208556-13A | | 1208556-14A | | 1208556-15A | |
| Sample Type: | Indoor Air | | Indoor Air | | Indoor Air | | Sub-Slab | | Sub-Slab | | Sub-Slab | | Sub-Slab | | Ambient Air | | Indoor Air | | Indoor Air | | Sub-Slab | | Sub-Slab | | Sub-Slab | | Indoor Air | | Indoor Air | | Indoor Air | |
| Sample Date: | 8/30/2012 | | 8/30/2012 | | 8/30/2012 | | 8/30/2012 | | 8/30/2012 | | 8/30/2012 | | 8/30/2012 | | 8/31/2012 | | 8/31/2012 | | 8/31/2012 | | 8/31/2012 | | 8/31/2012 | | 8/30/2012 | | 8/24/2012 | | 8/24/2012 | | 8/24/2012 | |
| Concentration Detected in: | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 |
| **Volatile Organic Compound** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Freon 12 | 0.56 | 2.8 | 0.54 | 2.7 | 0.51 | 2.5 | ND | ND | ND | ND | ND | ND | ND | ND | 0.45 | 2.2 | 0.42 | 2.1 | 0.41 | 2.0 | 0.46 J | 2.3 J | 0.44 J | 2.2 J | 0.43 | 2.1 | 0.41 | 2.0 | 0.41 | 2.0 | 0.42 | 2.1 |
| Freon 114 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Chloromethane | 0.50 | 1.0 | 0.51 | 1.0 | 0.55 | 1.1 | ND | ND | ND | ND | ND | ND | ND | ND | 0.43 | 0.90 | 0.54 | 1.1 | 1.2 | 2.5 | 0.62 J | 1.3 J | ND | ND | 0.16 J | 0.34 J | ND | ND | 0.44 | 0.90 | 0.57 | 1.2 |
| Vinyl Chloride | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,3-Butadiene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Bromomethane | 0.14 J | 0.53 J | ND | ND | 0.086 J | 0.34 J | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.12 J | 0.48 J | 0.16 J | 0.60 J | ND | ND | ND | ND | 0.36 J | 1.4 J | 0.11 J | 0.43 J | 0.16 J | 0.63 J | ND | ND |
| Chloroethane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.068 J | 0.18 J | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Freon 11 | 0.22 | 1.3 | 0.26 | 1.4 | 0.25 | 1.4 | ND | ND | ND | ND | ND | ND | ND | ND | 0.21 | 1.2 | 0.34 | 1.9 | 0.35 | 2.0 | 0.41 J | 2.3 J | 0.38 J | 2.1 J | 0.24 J | 1.4 J | 0.16 | 0.93 | 0.20 | 1.1 | 0.20 | 1.1 |
| Ethanol | 5.8 | 11 | 7.2 | 14 | 15 | 29 | ND | ND | ND | ND | ND | ND | ND | ND | 3.5 | 6.7 | 310 R | 580 R | 310 R | 580 R | 130 J | 240 J | 5.1 | 9.6 | 16 | 31 | 84 R | 160 R | 95 R | 180 R | 120 R | 230 R |
| Freon 113 | 0.072 J | 0.55 J | 0.080 J | 0.61 J | 0.087 J | 0.66 J | ND | ND | ND | ND | ND | ND | ND | ND | 0.076 J | 0.58 J | 0.088 J | 0.67 J | 0.057 J | 0.44 J | 0.13 J | 1.0 J | ND | ND | ND | ND | 0.063 J | 0.48 J | 0.062 J | 0.47 J | 0.064 J | 0.49 J |
| 1,1-Dichloroethene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Acetone | 21 | 50 | 22 | 52 | 25 | 59 | ND | ND | ND | ND | ND | ND | ND | ND | 4.3 | 10 | 32 | 75 | 29 | 68 | 16 J | 38 J | ND | ND | 9.0 J | 21 | 10 | 25 | 12 | 28 | 13 | 30 |
| 2-Propanol | 1.9 | 4.8 | 2.1 | 5.1 | 3.0 | 7.3 | ND | ND | ND | ND | ND | ND | 18 J | 45 J | 0.35 J | 0.86 J | 29 | 71 | 29 | 72 | 9.4 J | 23 J | 0.57 J | 1.4 J | 2.6 | 6.3 | 1.7 | 4.3 | 2.4 | 6.0 | 2.3 | 5.8 |
| Carbon Disulfide | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.31 J | 0.97 J | 0.43 J | 1.3 J | 0.48 J | 1.5 J | 0.80 J | 2.5 J | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 3-Chloropropene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Methylene Chloride | 6.0 | 21 | 5.9 | 20 | 6.1 | 21 | ND | ND | ND | ND | ND | ND | ND | ND | 0.074 J | 0.26 J | 0.47 | 1.6 | 0.48 | 1.6 | 0.48 J | 1.6 J | ND | ND | 0.50 J | 1.7 J | 0.22 J | 0.76 J | 0.16 J | 0.56 J | 0.15 J | 0.53 J |
| Methyl tert-butyl ether | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| trans-1,2-Dichloroethene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Hexane | 0.36 | 1.3 | 0.41 | 1.4 | 0.45 | 1.6 | ND | ND | ND | ND | ND | ND | ND | ND | 0.18 | 0.65 | 0.52 | 1.8 | 0.37 | 1.3 | 0.23 J | 0.80 J | ND | ND | 0.26 J | 0.90 J | 0.21 | 0.74 | 0.24 | 0.86 | 0.23 | 0.80 |
| 1,1-Dichloroethane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 2-Butanone (Methyl Ethyl Ketone) | 0.92 | 2.7 | 0.90 | 2.7 | 1.5 | 4.5 | ND | ND | ND | ND | ND | ND | ND | ND | 0.41 J | 1.2 J | 1.9 | 5.6 | 1.8 | 5.4 | 1.0 J | 3.1 J | 0.59 J | 1.7 J | 1.1 J | 3.3 J | 0.68 J | 2.0 J | 0.76 J | 2.2 J | 0.76 J | 2.2 J |
| cis-1,2-Dichloroethene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Tetrahydrofuran | 0.46 J | 1.4 J | 0.47 J | 1.4 J | 0.47 J | 1.4 J | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 1.3 | 3.8 | 1.0 | 3.1 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Chloroform | 0.065 J | 0.32 J | 0.084 J | 0.41 J | 0.062 J | 0.30 J | ND | ND | ND | ND | 3.2 J | 16 J | ND | ND | ND | ND | 0.10 J | 0.49 J | 0.16 J | 0.77 J | ND | ND | ND | ND | ND | ND | 0.12 J | 0.60 J | 0.14 J | 0.69 J | 0.13 J | 0.63 J |
| 1,1,1-Trichloroethane | 0.24 | 1.3 | 0.24 | 1.3 | 0.22 | 1.2 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.16 J | 0.88 J | 0.17 J | 0.92 J | 0.10 J | 0.55 J | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Cyclohexane | 0.088 J | 0.30 J | 0.13 J | 0.46 J | 0.19 | 0.67 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.18 J | 0.60 J | 0.12 J | 0.42 J | ND | ND | ND | ND | 0.21 J | 0.72 J | 0.14 J | 0.48 J | 0.065 J | 0.22 J | 0.042 J | 0.14 J |
| Carbon Tetrachloride | 0.072 J | 0.45 J | 0.095 J | 0.60 J | 0.070 J | 0.44 J | ND | ND | ND | ND | ND | ND | ND | ND | 0.080 J | 0.50 J | 0.088 J | 0.55 J | 0.084 J | 0.53 J | 0.075 J | 0.47 J | ND | ND | ND | ND | 0.080 J | 0.50 J | 0.074 J | 0.47 J | 0.082 J | 0.51 J |
| 2,2,4-Trimethylpentane | 0.15 J | 0.68 J | ND | ND | 0.094 J | 0.44 J | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.15 J | 0.71 J | 0.14 J | 0.64 J | ND | ND | ND | ND | ND | ND | ND | ND | 0.11 J | 0.52 J | ND | ND |
| Benzene | 0.20 | 0.63 | 0.16 J | 0.52 J | 0.20 | 0.64 | ND | ND | ND | ND | ND | ND | ND | ND | 0.15 J | 0.48 J | 0.22 | 0.71 | 0.18 | 0.59 | ND | ND | ND | ND | 0.14 J | 0.43 J | 0.17 | 0.53 | 0.18 | 0.58 | 0.16 J | 0.53 J |
| 1,2-Dichloroethane | 0.089 J | 0.36 J | 0.088 J | 0.36 J | 0.084 J | 0.34 J | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.19 | 0.77 | 0.18 | 0.73 | ND | ND | ND | ND | ND | ND | 0.37 | 1.5 | 0.47 | 1.9 | 0.53 | 2.2 |
| Heptane | 0.16 J | 0.64 J | 0.12 J | 0.47 J | 0.15 J | 0.60 J | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.83 | 3.4 | 0.79 | 3.2 | ND | ND | ND | ND | ND | ND | 0.084 J | 0.34 J | 0.071 J | 0.29 J | 0.070 J | 0.29 J |
| Trichloroethene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dichloropropane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,4-Dioxane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.16 J | 0.58 J | ND | ND | ND | ND | ND | ND |
| Bromodichloromethane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.048 J | 0.32 J | 0.045 J | 0.30 J | ND | ND | ND | ND | ND | ND | 0.027 J | 0.18 J | 0.026 J | 0.18 J | 0.028 J | 0.18 J |
| cis-1,3-Dichloropropene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 4-Methyl-2-pentanone | 0.093 J | 0.38 J | 0.043 J | 0.18 J | 0.11 J | 0.45 J | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.084 J | 0.34 J | 0.10 J | 0.43 J | ND | ND | ND | ND | ND | ND | 0.060 J | 0.25 J | ND | ND | ND | ND |
| Toluene | 2.3 | 8.7 | 2.4 | 9.1 | 3.0 | 11 | ND | ND | 160 | 600 | ND | ND | ND | ND | 0.46 | 1.7 | 5.1 | 19 | 5.0 | 19 | 2.3 J | 8.6 J | ND | ND | 0.70 | 2.6 | 0.79 | 3.0 | 0.84 | 3.2 | 0.91 | 3.4 |
| trans-1,3-Dichloropropene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,2-Trichloroethane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Tetrachloroethene | 38 | 260 | 37 | 250 | 32 | 220 | 20,000 | 130,000 | 18,000 | 120,000 | 3,200 | 22,000 | 8,300 | 56,000 | ND | ND | 0.60 | 4.1 | 0.58 | 3.9 | 150 J | 990 J | 230 | 1,600 | 110 | 730 | 0.030 J | 0.20 J | ND | ND | ND | ND |
| 2-Hexanone | 0.078 J | 0.32 J | ND | ND | 0.064 J | 0.26 J | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Dibromochloromethane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dibromoethane (EDB) | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Chlorobenzene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Ethyl Benzene | 0.79 | 3.4 | 0.84 | 3.6 | 0.80 | 3.5 | ND | ND | ND | ND | ND | ND | ND | ND | 0.098 J | 0.43 J | 0.29 | 1.3 | 0.27 | 1.2 | 0.14 J | 0.61 J | ND | ND | 0.086 J | 0.37 J | 0.10 J | 0.44 J | 0.10 J | 0.43 J | 0.099 J | 0.43 J |
| m,p-Xylene | 2.7 | 12 | 2.4 | 10 | 2.7 | 12 | ND | ND | 9.0 J | 39 J | ND | ND | ND | ND | 0.14 J | 0.59 J | 1.0 | 4.4 | 0.98 | 4.3 | 0.44 J | 1.9 J | ND | ND | 0.26 J | 1.1 J | 0.27 | 1.2 | 0.29 | 1.3 | 0.28 | 1.2 |
| o-Xylene | 0.71 | 3.1 | 0.71 | 3.1 | 0.77 | 3.4 | ND | ND | ND | ND | ND | ND | ND | ND | 0.059 J | 0.26 J | 0.23 | 1.0 | 0.26 | 1.1 | 0.19 J | 0.83 J | ND | ND | ND | ND | 0.11 J | 0.46 J | 0.091 J | 0.39 J | 0.13 J | 0.56 J |
| Styrene | 0.46 | 2.0 | 0.43 | 1.8 | 0.53 | 2.2 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.16 J | 0.67 J | 0.16 J | 0.70 J | ND | ND | ND | ND | ND | ND | 0.072 J | 0.31 J | 0.062 J | 0.26 J | 0.066 J | 0.28 J |
| Bromoform | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Cumene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.069 J | 0.34 J | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.067 J | 0.33 J | 0.080 J | 0.39 J |
| 1,1,2,2-Tetrachloroethane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Propylbenzene | 0.10 J | 0.50 J | 0.13 J | 0.63 J | 0.099 J | 0.48 J | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.046 J | 0.23 J | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 4-Ethyltoluene | 0.45 | 2.2 | 0.41 | 2.0 | 0.47 | 2.3 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.077 J | 0.38 J | ND | ND | 0.075 J | 0.37 J |
| 1,3,5-Trimethylbenzene | ND | ND | 0.17 | 0.84 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.054 J | 0.27 J | 0.056 J | 0.28 J | ND | ND | ND | ND | ND | ND | 0.029 J | 0.14 J | 0.038 J | 0.19 J | 0.033 J | 0.16 J |
| 1,2,4-Trimethylbenzene | 0.48 | 2.4 | 0.44 | 2.2 | 0.51 | 2.5 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.20 | 0.98 | 0.18 | 0.90 | ND | ND | ND | ND | ND | ND | 0.10 J | 0.50 J | 0.11 J | 0.55 J | 0.11 J | 0.53 J |
| 1,3-Dichlorobenzene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,4-Dichlorobenzene | ND | ND | ND | ND | 0.20 | 1.2 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.22 J | 1.3 J | ND | ND | ND | ND | ND | ND |
| alpha-Chlorotoluene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dichlorobenzene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2,4-Trichlorobenzene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Hexachlorobutadiene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |

**Notes:**

Exceeds indoor air EPA Regional Screening Level and Vapor Intrusion Screening Level Calculator values for target hazard quotient of 1 and target risk of 1E-06

Exceeds sub-slab EPA Regional Screening Level and Vapor Intrusion Screening Level Calculator values for target hazard quotient of 1 and target risk of 1E-06

J = Estimated value

J+ = Estimated value, may be biased high

ND = Non detect

NR = Not reported

R = Data are unusable

E = Exceeds insturment calibration range

**TABLE 5**

**ANALYTICAL RESULTS FOR VOLATILE ORGANIC COMPOUNDS IN VAPOR INTRUSION SAMPLES**
**AUGUST 2012 AND APRIL - MAY 2013**

| Sample Location: | 11 | | | | | | | | 13 | | | | | | 18 | | | | | | 21 | | | | 21B | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Property Use: | Residential | | | | | | | | Residential | | | | | | Residential | | | | | | Residential | | | | Residential | |
| Field Sample ID: | IA-001-11-0812 | | AA-001-11-0812 | | SS-002-11-0812 | | SS-001-11-0812 | | IA-001-13-0812 | | SS-001-13-0812 | | SS-002-13-0812 | | IA-001-18-0812 | | SS-002-18-0812 | | SS-001-18-0812 | | AA-001-21-0812 | | IA-001-21-0812 | | IA-001-21B-0812 | |
| Lab Sample ID: | 1208557-01A | | 1208557-02A | | 1208557-03A | | 1208557-04A | | 1208725-09A | | 1208725-10A | | 1208725-12A | | 1208557-11A | | 1208557-12A | | 1208557-14A | | 1208556-08A | | 1208556-09A | | 1208556-10A | |
| Sample Type: | Indoor Air | | Ambient Air | | Sub-slab | | Sub-Slab | | Indoor Air | | Sub-Slab | | Sub-Slab | | Indoor Air | | Sub-Slab | | Sub-Slab | | Ambient Air | | Indoor Air | | Indoor Air | |
| Sample Date: | 8/23/2012 | | 8/23/2012 | | 8/23/2012 | | 8/23/2012 | | 8/30/2012 | | 8/30/2012 | | 8/30/2012 | | 8/23/2012 | | 8/23/2012 | | 8/23/2012 | | 8/23/2012 | | 8/23/2012 | | 8/23/2012 | |
| Concentration Detected in: | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 |
| **Volatile Organic Compound** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Freon 12 | 0.44 | 2.2 | 0.42 | 2.1 | 0.48 | 2.4 | 0.45 | 2.2 | 0.48 | 2.4 | 0.45 | 2.2 | 0.49 | 2.4 | 0.51 | 2.5 | 0.45 | 2.2 | 0.48 J | 2.4 J | 0.47 | 2.3 | 0.45 | 2.2 | 0.41 | 2.0 |
| Freon 114 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Chloromethane | 0.39 | 0.80 | 0.35 | 0.72 | 0.20 | 0.42 | 0.30 | 0.63 | 0.40 | 0.82 | 0.25 | 0.51 | 0.18 | 0.38 | 0.48 | 0.99 | ND | ND | ND | ND | 0.47 | 0.97 | 0.92 | 1.9 | 0.64 | 1.3 |
| Vinyl Chloride | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,3-Butadiene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.65 | 1.4 | 0.37 | 0.82 |
| Bromomethane | ND | ND | ND | ND | 0.20 | 0.77 | 0.10 J | 0.39 J | 0.074 J | 0.29 J | 0.15 J | 0.58 J | 0.14 J | 0.53 J | ND | ND | 0.14 J | 0.56 J | 0.68 J | 2.6 J | ND | ND | ND | ND | 0.14 J | 0.56 J |
| Chloroethane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Freon 11 | 0.21 | 1.2 | 0.20 | 1.1 | 0.22 | 1.2 | 0.22 | 1.2 | 0.29 | 1.6 | 0.33 | 1.8 | 0.33 | 1.8 | 0.25 | 1.4 | 0.21 | 1.2 | 0.33 J | 1.8 J | 0.20 | 1.2 | 0.21 | 1.2 | 0.20 | 1.1 |
| Ethanol | 23 | 43 | 9.3 | 18 | 18 | 34 | 2.6 | 4.8 | 5.5 | 10 | 2.8 | 5.4 | 15 | 28 | 27 | 51 | 2.7 | 5.0 | ND | ND | 10 J+ | 20 J+ | 45 J+ | 86 J+ | 14 J+ | 26 J+ |
| Freon 113 | 0.075 J | 0.58 J | 0.050 J | 0.38 J | 0.067 J | 0.52 J | 0.064 J | 0.49 J | 0.073 J | 0.56 J | 0.066 J | 0.50 J | 0.059 J | 0.45 J | 0.062 J | 0.47 J | 0.078 J | 0.60 J | ND | ND | 0.056 J | 0.43 J | 0.057 J | 0.44 J | 0.071 J | 0.54 J |
| 1,1-Dichloroethene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Acetone | 11 | 26 | 16 | 37 | 8.1 | 19 | 2.8 | 6.6 | 13 | 31 | 7.2 | 17 | 4.3 | 10 | 7.9 | 19 | 5.7 | 14 | 6.5 | 15 | 14 | 32 | 12 | 28 | 11 | 26 |
| 2-Propanol | 0.56 J | 1.4 J | 40 | 98 | 3.0 | 7.4 | 0.20 J | 0.50 J | 0.69 J | 1.7 J | 0.40 J | 0.98 J | 0.14 J | 0.34 J | 0.81 J | 2.0 J | 0.24 J | 0.60 J | ND | ND | 40 | 97 | 6.5 | 16 | 2.6 | 6.5 |
| Carbon Disulfide | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 3-Chloropropene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Methylene Chloride | ND | ND | ND | ND | 0.32 J+ | 1.1 J+ | ND | ND | 0.15 J | 0.54 J | 0.12 J | 0.41 J | 0.093 J | 0.32 J | ND | ND | 0.12 J | 0.40 J | ND | ND | 0.12 J | 0.41 J | 0.14 J | 0.50 J | 0.12 J | 0.42 J |
| Methyl tert-butyl ether | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| trans-1,2-Dichloroethene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Hexane | 0.16 J | 0.55 J | 0.20 | 0.72 | 0.21 | 0.74 | ND | ND | 0.12 J | 0.42 J | ND | ND | ND | ND | 0.24 | 0.85 | ND | ND | ND | ND | 0.30 J+ | 1.1 J+ | 0.55 | 1.9 | 0.38 | 1.3 |
| 1,1-Dichloroethane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 2-Butanone (Methyl Ethyl Ketone) | 0.31 J | 0.91 J | 2.7 | 8.0 | 0.98 | 2.9 | 0.28 J | 0.83 J | 0.79 J | 2.3 J | 0.35 J | 1.0 J | 0.38 J | 1.1 J | 0.44 J | 1.3 J | 0.58 J | 1.7 J | ND | ND | 3.1 | 9.0 | 0.79 J | 2.3 J | 0.87 | 2.6 |
| cis-1,2-Dichloroethene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Tetrahydrofuran | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.25 J | 0.73 J |
| Chloroform | ND | ND | ND | ND | ND | ND | 0.051 J | 0.25 J | ND | ND | ND | ND | ND | ND | ND | ND | 0.068 J | 0.33 J | ND | ND | ND | ND | 0.054 J | 0.26 J | 0.049 J | 0.24 J |
| 1,1,1-Trichloroethane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Cyclohexane | 0.053 J | 0.18 J | ND | ND | 0.24 | 0.83 | ND | ND | 0.069 J | 0.24 J | ND | ND | ND | ND | 0.12 J | 0.42 J | ND | ND | ND | ND | 0.055 J | 0.19 J | 0.14 J | 0.50 J | 0.15 J | 0.52 J |
| Carbon Tetrachloride | 0.063 J | 0.40 J | 0.059 J | 0.37 J | 0.059 J | 0.37 J | 0.059 J | 0.37 J | 0.062 J | 0.39 J | 0.062 J | 0.39 J | 0.096 J | 0.60 J | 0.070 J | 0.44 J | 0.080 J | 0.51 J | ND | ND | 0.11 J | 0.67 J | 0.060 J | 0.37 J | 0.069 J | 0.44 J |
| 2,2,4-Trimethylpentane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.12 J | 0.57 J | 0.073 J | 0.34 J | ND | ND |
| Benzene | 0.18 | 0.58 | 7.0 | 22 | 0.11 J | 0.36 J | 0.041 J | 0.13 J | 0.17 | 0.53 | 0.099 J | 0.32 J | 0.055 J | 0.18 J | 0.20 | 0.64 | 0.037 J | 0.12 J | ND | ND | 3.6 | 12 | 0.59 | 1.9 | 0.41 | 1.3 |
| 1,2-Dichloroethane | ND | ND | ND | ND | ND | ND | ND | ND | 1.7 | 6.8 | 0.72 | 2.9 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.060 J | 0.24 J | ND | ND |
| Heptane | ND | ND | 0.070 J | 0.28 J | ND | ND | ND | ND | 0.081 J | 0.33 J | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.12 J | 0.51 J | 0.18 | 0.74 | 0.16 J | 0.65 J |
| Trichloroethene | ND | ND | 0.064 J | 0.35 J | ND | ND | ND | ND | ND | ND | ND | ND | 0.22 | 1.2 | ND | ND | ND | ND | ND | ND | 0.054 J | 0.29 J | ND | ND | ND | ND |
| 1,2-Dichloropropane | ND | ND | ND | ND | ND | ND | ND | ND | 0.089 J | 0.41 J | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,4-Dioxane | ND | ND | ND | ND | 0.24 | 0.88 | ND | ND | ND | ND | ND | ND | ND | ND J | 0.30 | 1.1 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Bromodichloromethane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| cis-1,3-Dichloropropene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 4-Methyl-2-pentanone | ND | ND | ND | ND | 0.077 J | 0.32 J | ND | ND | 0.053 J | 0.22 J | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Toluene | 0.67 | 2.5 | 1.1 | 4.1 | 0.52 | 2.0 | 0.27 | 1.0 | 2.2 | 8.1 | 1.4 | 5.2 | 0.090 J | 0.34 J | 0.93 | 3.5 | 0.14 J | 0.55 J | 0.24 J | 0.89 J | 1.8 | 6.8 | 1.9 | 7.2 | 1.4 | 5.2 |
| trans-1,3-Dichloropropene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,2-Trichloroethane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Tetrachloroethene | ND | ND | ND | ND | 7.4 J+ | 50 J+ | 0.24 J+ | 1.6 J+ | 0.072 J | 0.48 J | 0.16 J | 1.0 J | 9.9 | 67 | 0.21 J+ | 1.4 J+ | 58 | 390 | 310 | 2100 | 0.063 J | 0.43 J | 0.12 J | 0.81 J | 0.19 | 1.3 |
| 2-Hexanone | ND | ND | ND | ND | 0.077 J | 0.32 J | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Dibromochloromethane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dibromoethane (EDB) | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Chlorobenzene | ND | ND | 0.33 | 1.5 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.40 | 1.9 | ND | ND | ND | ND |
| Ethyl Benzene | 0.069 J | 0.30 J | 0.11 J | 0.48 J | 0.055 J | 0.24 J | ND | ND | 0.095 J | 0.41 J | 0.040 J | 0.17 J | ND | ND | 0.066 J | 0.28 J | ND | ND | ND | ND | 0.17 J | 0.74 J | 0.17 | 0.74 | 0.16 J | 0.70 J |
| m,p-Xylene | 0.16 J | 0.70 J | 0.28 | 1.2 | 0.15 J | 0.64 J | 0.046 J | 0.20 J | 0.28 | 1.2 | 0.22 | 0.96 | ND | ND | 0.20 | 0.89 | ND | ND | ND | ND | 0.52 | 2.3 | 0.56 | 2.4 | 0.41 | 1.8 |
| o-Xylene | 0.067 J | 0.29 J | 0.91 | 4.0 | 0.052 J | 0.22 J | ND | ND | 0.14 J | 0.60 J | 0.059 J | 0.26 J | ND | ND | 0.066 J | 0.28 J | ND | ND | ND | ND | 1.2 | 5.2 | 0.19 | 0.81 | 0.14 J | 0.60 J |
| Styrene | ND | ND | 0.15 J | 0.62 J | 0.044 J | 0.19 J | ND | ND | 0.082 J | 0.35 J | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.15 J | 0.63 J | 0.14 J | 0.59 J | 0.086 J | 0.36 J |
| Bromoform | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Cumene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.044 J | 0.22 J | 0.051 J | 0.25 J | ND | ND |
| 1,1,2,2-Tetrachloroethane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Propylbenzene | ND | ND | 0.74 | 3.7 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.85 | 4.2 | 0.032 J | 0.16 J | 0.038 J | 0.19 J |
| 4-Ethyltoluene | 0.056 J | 0.27 J | 0.099 J | 0.49 J | 0.029 J | 0.14 J | ND | ND | 0.12 J | 0.56 J | 0.056 J | 0.28 J | ND | ND | 0.065 J | 0.32 J | ND | ND | ND | ND | 0.10 J | 0.51 J | 0.11 J | 0.54 J | 0.087 J | 0.43 J |
| 1,3,5-Trimethylbenzene | ND | ND | 0.033 J | 0.16 J | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2,4-Trimethylbenzene | 0.054 J | 0.26 J | 0.11 J | 0.56 J | 0.048 J | 0.24 J | ND | ND | 0.19 | 0.94 | 0.14 J | 0.67 J | ND | ND | 0.055 J | 0.27 J | ND | ND | ND | ND | 0.13 J | 0.66 J | 0.15 J | 0.75 J | 0.091 J | 0.45 J |
| 1,3-Dichlorobenzene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,4-Dichlorobenzene | ND | ND | 2.8 | 17 | ND | ND | ND | ND | ND | ND | 0.44 | 2.6 | 0.26 | 1.6 | ND | ND | ND | ND | ND | ND | 2.4 | 14 | ND | ND | 0.057 J | 0.34 J |
| alpha-Chlorotoluene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dichlorobenzene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2,4-Trichlorobenzene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Hexachlorobutadiene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |

**Notes:**

Exceeds indoor air EPA Regional Screening Level and Vapor Intrusion Screening Level Calculator values for target hazard quotient of 1 and target risk of 1E-06

Exceeds sub-slab EPA Regional Screening Level and Vapor Intrusion Screening Level Calculator values for target hazard quotient of 1 and target risk of 1E-06

J = Estimated value

J+ = Estimated value, may be biased high

ND = Non detect

NR = Not reported

R = Data are unusable

E = Exceeds insturment calibration range

**TABLE 5**

**ANALYTICAL RESULTS FOR VOLATILE ORGANIC COMPOUNDS IN VAPOR INTRUSION SAMPLES**
**AUGUST 2012 AND APRIL - MAY 2013**

| Sample Location: | 26 | | | | | | | | | | 28 | | | | | | 31 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Property Use: | Residential | | | | | | | | | | Residential | | | | | | Residential | | | | | |
| Field Sample ID: | AA-001-26-0812 | | AA-001D-26-0812 | | SS-001-026-0812 | | IA-001-026-0812 | | SS-002-26-0812 | | IA-001-28-0812 | | SS-001-28-0812 | | SS-002-28-0812 | | SS-001-31-0812 | | SS-002-31-0812 | | IA-001-31-0812 | |
| Lab Sample ID: | 1208556-11A | | 1208556-12A | | 1208556-16A | | 1208556-17A | | 1208557-09A | | 1208556-05A | | 1208556-06A | | 1208556-07A | | 1208557-05A | | 1208557-06A | | 1208557-08A | |
| Sample Type: | Ambient Air | | Ambient Air | | Sub-Slab | | Indoor Air | | Sub-Slab | | Indoor Air | | Sub-Slab | | Sub-Slab | | Sub-Slab | | Sub-Slab | | Indoor Air | |
| Sample Date: | 8/24/2012 | | 8/24/2012 | | 8/24/2012 | | 8/24/2012 | | 8/24/2012 | | 8/22/2012 | | 8/23/2012 | | 8/23/2012 | | 8/23/2012 | | 8/23/2012 | | 8/23/2012 | |
| Concentration Detected in: | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 |
| **Volatile Organic Compound** | | | | | | | | | | | | | | | | | | | | | | |
| Freon 12 | 0.37 | 1.8 | 0.41 | 2.0 | ND | ND | 0.47 | 2.3 | ND | ND | 0.48 | 2.4 | 0.49 | 2.4 | 0.45 | 2.2 | 0.55 J | 2.7 J | 0.48 J | 2.4 J | 0.45 | 2.2 |
| Freon 114 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Chloromethane | 0.46 | 0.95 | 0.35 | 0.72 | ND | ND | 0.42 | 0.86 | ND | ND | 0.60 | 1.2 | 0.20 | 0.41 | 0.33 | 0.68 | ND | ND | ND | ND | 0.40 | 0.84 |
| Vinyl Chloride | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,3-Butadiene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Bromomethane | 0.11 J | 0.44 J | 0.13 J | 0.50 J | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.14 J | 0.56 J |
| Chloroethane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Freon 11 | 0.16 J | 0.91 J | 0.20 | 1.1 | ND | ND | 0.28 | 1.6 | ND | ND | 0.19 J | 1.1 J | 0.20 | 1.1 | 0.20 | 1.1 | ND | ND | ND | ND | 0.23 | 1.3 |
| Ethanol | 11 J+ | 20 J+ | 20 J+ | 38 J+ | ND | ND | 79 R | 150 R | 14 J | 26 J | 24 J+ | 44 J+ | 2.2 J+ | 4.2 J+ | 1.4 J+ | 2.7 J+ | ND | ND | 6.9 J | 13 J | 54 | 100 |
| Freon 113 | 0.058 J | 0.45 J | 0.060 J | 0.46 J | ND | ND | 0.067 J | 0.51 J | ND | ND | 0.068 J | 0.52 J | 0.083 J | 0.64 J | 0.066 J | 0.50 J | ND | ND | ND | ND | 0.082 J | 0.62 J |
| 1,1-Dichloroethene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Acetone | 17 | 40 | 13 | 30 | ND | ND | 8.1 | 19 | 4.0 J | 9.4 J | 10 | 24 | 5.4 | 13 | 5.0 | 12 | 2.3 J | 5.4 J | 5.0 J | 12 J | 10 | 24 |
| 2-Propanol | 49 | 120 | 36 | 88 | ND | ND | 0.51 J | 1.2 J | ND | ND | 1.3 | 3.2 | ND | ND | ND | ND | ND | ND | ND | ND | 0.80 J | 2.0 J |
| Carbon Disulfide | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.88 J+ | 2.7 J+ | ND | ND | ND | ND | ND | ND |
| 3-Chloropropene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Methylene Chloride | 0.11 J | 0.37 J | 0.14 J | 0.49 J | ND | ND | 0.14 J | 0.50 J | ND | ND | 0.16 J | 0.56 J | 0.067 J | 0.23 J | 0.11 J | 0.37 J | ND | ND | ND | ND | ND | ND |
| Methyl tert-butyl ether | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| trans-1,2-Dichloroethene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Hexane | 0.18 | 0.63 | 0.16 | 0.57 | ND | ND | 0.21 | 0.73 | ND | ND | 1.0 | 3.7 | ND | ND | ND | ND | ND | ND | ND | ND | 0.25 | 0.87 |
| 1,1-Dichloroethane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 2-Butanone (Methyl Ethyl Ketone) | 4.4 | 13 | 3.1 | 9.1 | ND | ND | 0.57 J | 1.7 J | ND | ND | 0.88 J | 2.6 J | 0.60 J | 1.8 J | 0.50 J | 1.5 J | ND | ND | ND | ND | 1.1 | 3.3 |
| cis-1,2-Dichloroethene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Tetrahydrofuran | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.26 J | 0.77 J |
| Chloroform | ND | ND | ND | ND | ND | ND | 0.049 J | 0.24 J | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.052 J | 0.25 J |
| 1,1,1-Trichloroethane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.28 | 1.5 | 0.26 | 1.4 | ND | ND | ND | ND | ND | ND |
| Cyclohexane | 0.045 J | 0.16 J | ND | ND | ND | ND | ND | ND | ND | ND | 0.26 | 0.90 | 0.036 J | 0.12 J | 0.023 J | 0.080 J | ND | ND | ND | ND | 0.091 J | 0.31 J |
| Carbon Tetrachloride | 0.064 J | 0.40 J | 0.052 J | 0.33 J | ND | ND | 0.065 J | 0.41 J | ND | ND | 0.063 J | 0.40 J | ND | ND | ND | ND | ND | ND | ND | ND | 0.068 J | 0.43 J |
| 2,2,4-Trimethylpentane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.16 J | 0.76 J | ND | ND | ND | ND | ND | ND | ND | ND | 0.10 J | 0.49 J |
| Benzene | 5.0 | 16 | 3.8 | 12 | ND | ND | 0.18 | 0.56 | ND | ND | 0.34 | 1.1 | ND | ND | ND | ND | ND | ND | ND | ND | 0.18 | 0.59 |
| 1,2-Dichloroethane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.049 J | 0.20 J | ND | ND | 0.025 J | 0.10 J | ND | ND | ND | ND | ND | ND |
| Heptane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.29 | 1.2 | ND | ND | 0.057 J | 0.23 J | ND | ND | ND | ND | ND | ND |
| Trichloroethene | 0.062 J | 0.33 J | 0.056 J | 0.30 J | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 1.8 J | 9.9 J | 1.4 J | 7.3 J | ND | ND |
| 1,2-Dichloropropane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,4-Dioxane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Bromodichloromethane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| cis-1,3-Dichloropropene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 4-Methyl-2-pentanone | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Toluene | 1.6 | 5.9 | 1.2 | 4.7 | ND | ND | 0.81 | 3.1 | ND | ND | 1.4 | 5.2 | ND | ND | ND | ND | ND | ND | ND | ND | 0.97 | 3.6 |
| trans-1,3-Dichloropropene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,2-Trichloroethane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Tetrachloroethene | 0.083 J | 0.56 J | 0.070 J | 0.47 J | 810 | 5500 | 0.34 | 2.3 | 1,400 | 9,400 | 0.11 J | 0.74 J | 2.3 | 16 | 0.55 | 3.7 | 600 | 4,000 | 650 | 4,400 | 0.33 J+ | 2.2 J+ |
| 2-Hexanone | ND | ND | 0.071 J | 0.29 J | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.078 J | 0.32 J |
| Dibromochloromethane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dibromoethane (EDB) | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.44 J | 3.4 J | ND | ND |
| Chlorobenzene | 0.49 | 2.2 | 0.39 | 1.8 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Ethyl Benzene | 0.11 J | 0.49 J | 0.13 J | 0.58 J | ND | ND | 0.088 J | 0.38 J | ND | ND | 0.12 J | 0.51 J | ND | ND | 0.016 J | 0.070 J | ND | ND | ND | ND | 0.049 J | 0.21 J |
| m,p-Xylene | 0.35 | 1.5 | 0.28 | 1.2 | ND | ND | 0.20 | 0.87 | ND | ND | 0.36 | 1.5 | 0.044 J | 0.19 J | 0.029 J | 0.13 J | ND | ND | ND | ND | 0.18 | 0.77 |
| o-Xylene | 1.6 | 6.8 | 1.2 | 5.0 | ND | ND | 0.11 J | 0.48 J | ND | ND | 0.12 J | 0.52 J | ND | ND | ND | ND | ND | ND | ND | ND | 0.074 J | 0.32 J |
| Styrene | 0.18 J | 0.76 J | 0.14 J | 0.61 J | ND | ND | 0.048 J | 0.20 J | ND | ND | 0.064 J | 0.27 J | ND | ND | ND | ND | ND | ND | ND | ND | 0.052 J | 0.22 J |
| Bromoform | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Cumene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,2,2-Tetrachloroethane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Propylbenzene | 1.1 | 5.3 | 0.89 | 4.4 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 4-Ethyltoluene | 0.12 J | 0.61 J | 0.087 J | 0.43 J | ND | ND | 0.072 J | 0.35 J | ND | ND | 0.11 J | 0.55 J | ND | ND | ND | ND | ND | ND | ND | ND | 0.067 J | 0.33 J |
| 1,3,5-Trimethylbenzene | 0.046 J | 0.22 J | 0.035 J | 0.17 J | ND | ND | 0.033 J | 0.16 J | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2,4-Trimethylbenzene | 0.11 J | 0.54 J | 0.099 J | 0.48 J | ND | ND | 0.091 J | 0.45 J | ND | ND | 0.15 J | 0.73 J | ND | ND | ND | ND | ND | ND | ND | ND | 0.097 J | 0.48 J |
| 1,3-Dichlorobenzene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,4-Dichlorobenzene | 2.8 | 17 | 2.6 | 15 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.19 J | 1.2 J | 0.42 J | 2.6 J | ND | ND |
| alpha-Chlorotoluene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.30 J | 1.6 J | ND | ND |
| 1,2-Dichlorobenzene | ND | ND | 0.050 J | 0.30 J | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2,4-Trichlorobenzene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Hexachlorobutadiene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |

**Notes:**

Exceeds indoor air EPA Regional Screening Level and Vapor Intrusion Screening Level Calculator values for target hazard quotient of 1 and target risk of 1E-06

Exceeds sub-slab EPA Regional Screening Level and Vapor Intrusion Screening Level Calculator values for target hazard quotient of 1 and target risk of 1E-06

J = Estimated value

J+ = Estimated value, may be biased high

ND = Non detect

NR = Not reported

R = Data are unusable

E = Exceeds insturment calibration range

**TABLE 5**

**ANALYTICAL RESULTS FOR VOLATILE ORGANIC COMPOUNDS IN VAPOR INTRUSION SAMPLES**
**AUGUST 2012 AND APRIL - MAY 2013**

| Sample Location: | 33 | | | | | | | | 34 | | | | 35 | | | | | | | | | | | | | | 37 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Property Use: | Residential | | | | | | | | Residential | | | | Residential | | | | | | | | | | | | | | Residential | | | | | | | |
| Field Sample ID: | AA-001-33-0413 | | IA-001-33-0413 | | SS-001-33-0413 | | SS-002-33-0413 | | IA-001-34-0812 | | IA-002-34-0812 | | AA-001-35-0413 | | AA-001-35-0413D | | IA-001-35-0413 | | IA-001-35-0413 Lab Dup | | IA-001-35-0413D | | SS-001-35-0413 | | SS-001-35-0413D | | SS-002-35-0413 | | SS-002-37-0812 | | IA-001-37-0812 | | SS-001-37-0812 | | AA-001-37-0812 | |
| Lab Sample ID: | 1305096-08A | | 1305096-07A | | 1305096-06A | | 1305096-09A | | 1208725-11A | | 1208725-08A | | 1304410-06A | | 1304410-07A | | 1304410-04A | | 1304410-04AA | | 1304410-05A | | 1304410-01A | | 1304410-02A | | 1304410-03A | | 1208556-18A | | 1208556-19A | | 1208556-20A | | 1208557-07A | |
| Sample Type: | Ambient Air | | Indoor Air | | Sub-Slab | | Sub-Slab | | Indoor Air | | Indoor Air | | Ambient Air | | Ambient Air | | Indoor Air | | Indoor Air Lab Dup | | Indoor Air | | Sub-Slab | | Sub-Slab | | Sub-Slab | | Sub-Slab | | Indoor Air | | Sub-Slab | | Ambient Air | |
| Sample Date: | 4/25/2013 | | 4/25/2013 | | 4/25/2013 | | 4/25/2013 | | 8/30/2012 | | 8/30/2012 | | 4/12/2013 | | 4/12/2013 | | 4/12/2013 | | 4/12/2013 | | 4/12/2013 | | 4/12/2013 | | 4/12/2013 | | 4/12/2013 | | 8/23/2012 | | 8/23/2012 | | 8/23/2012 | | 8/23/2012 | |
| Concentration Detected in: | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 |
| **Volatile Organic Compound** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Freon 12 | 0.49 | 2.4 | 0.48 | 2.4 | ND | ND | ND | ND | 0.48 J | 2.4 | 0.45 J | 2.2 | 0.46 J | 2.3 | 0.47 J | 2.3 | 0.45 J | 2.2 | 0.47 J | 2.3 | 0.45 J | 2.2 | 0.48 J | 2.4 | 0.44 J | 2.2 | 0.44 J | 2.2 | 0.46 J | 2.3 | 0.43 J | 2.1 | 0.42 J | 2.1 | 0.46 J | 2.3 |
| Freon 114 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Chloromethane | 0.53 | 1.1 | 0.65 | 1.3 | ND | ND | ND | ND | 0.43 J | 0.89 | 0.42 J | 0.86 | 0.62 J | 1.3 | 0.53 J | 1.1 | 0.44 J | 0.90 | 0.43 J | 0.88 | 0.42 J | 0.87 | ND | ND | 0.069 J | 0.14 J | ND | ND | 0.074 J | 0.15 J | 0.30 J | 0.62 J | 0.19 J | 0.40 J | 0.41 J | 0.84 J |
| Vinyl Chloride | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,3-Butadiene | ND | ND | 0.12 J | 0.26 J | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.048 J | 0.11 J | 0.039 J | 0.086 J | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Bromomethane | ND | ND | ND | ND | ND | ND | ND | ND | 0.17 J | 0.65 J | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.10 J | 0.39 J | 0.15 J | 0.58 J |
| Chloroethane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Freon 11 | 0.20 | 1.1 | 0.20 | 1.1 | ND | ND | ND | ND | 0.30 | 1.7 | 0.26 | 1.4 | 0.22 | 1.2 | 0.20 | 1.1 | 0.20 | 1.2 | 0.21 | 1.2 | 0.19 | 1.0 | 0.22 | 1.2 | 0.21 | 1.2 | 0.20 | 1.1 | 0.24 | 1.4 | 0.23 | 1.3 | 0.21 | 1.2 | 0.23 | 1.3 |
| Ethanol | 1.6 | 3.0 | 9.6 | 18 | ND | ND | 12 | 22 | 15 | 29 | 6.2 | 12 | 6.0 | 11 | 1.4 | 2.5 | 8.9 | 17 | 9.0 | 17 | 5.4 | 10 | 12 | 22 | 12 | 22 | 17 | 32 | 2.6 J+ | 4.8 J+ | 16 J+ | 31 J+ | 5.1 J+ | 9.6 J+ | 2.4 | 4.4 |
| Freon 113 | 0.068 J | 0.52 J | 0.064 J | 0.49 J | ND | ND | ND | ND | 0.077 J | 0.59 J | 0.055 J | 0.42 J | 0.067 J | 0.51 J | ND | ND | 0.052 J | 0.40 J | 0.058 J | 0.44 J | 0.058 J | 0.44 J | 0.058 J | 0.44 J | ND | ND | 0.060 J | 0.46 J | 0.11 J | 0.82 J | 0.087 J | 0.66 J | 0.081 J | 0.62 J | 0.073 J | 0.56 J |
| 1,1-Dichloroethene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Acetone | 2.7 J+ | 6.5 J+ | 4.5 J+ | 11 J+ | ND | ND | 15 J+ | 35 J+ | 12 | 29 | 3.8 | 9.2 | 7.1 | 17 | 3.3 | 7.8 | 4.7 | 11 | 4.9 | 12 | 3.4 | 8.0 | 3.8 | 9.1 | 4.2 | 10 | 4.8 | 11 | 3.0 | 7.2 | 6.9 | 16 | 6.8 | 16 | 4.3 | 10 |
| 2-Propanol | 0.60 J | 1.5 J | 22 | 54 | 18 J | 46 J | 1.6 J | 4.0 J | 1.2 | 2.8 | 0.52 J | 1.3 J | 1.1 | 2.8 | 0.42 J | 1.0 J | 0.58 J | 1.4 J | 0.57 J | 1.4 J | 0.34 J | 0.82 J | 4.3 | 10 | 4.2 | 10 | 5.3 | 13 | 0.35 J | 0.87 J | 4.3 | 11 | 1.1 | 2.8 | 0.28 J | 0.68 J |
| Carbon Disulfide | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.90 J | 2.8 J | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 3-Chloropropene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Methylene Chloride | 0.11 J | 0.38 J | 0.11 J | 0.37 J | ND | ND | ND | ND | 0.084 J | 0.29 J | 0.082 J | 0.28 J | 0.53 | 1.8 | 0.13 J | 0.44 J | 0.29 | 1.0 | 0.29 | 1.0 | 0.15 J | 0.51 J | 0.044 J | 0.15 J | 0.048 J | 0.17 J | 0.073 J | 0.25 J | 0.092 J | 0.32 J | 0.16 J | 0.56 J | 0.084 J | 0.29 J | ND | ND |
| Methyl tert-butyl ether | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.058 J | 0.21 J | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| trans-1,2-Dichloroethene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Hexane | ND | ND | ND | ND | ND | ND | ND | ND | 0.078 J | 0.28 J | 0.090 J | 0.32 J | 2.1 | 7.4 | ND | ND | 4.2 | 15 | 4.2 | 15 | 0.55 J+ | 1.9 J+ | ND | ND | ND | ND | 0.92 | 3.2 | ND | ND | 0.14 J | 0.49 J | ND | ND | 0.12 J | 0.43 J |
| 1,1-Dichloroethane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | <0.58 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 2-Butanone (Methyl Ethyl Ketone) | 0.38 J | 1.1 J | 0.34 J | 0.99 J | ND | ND | 2.7 J | 8.0 J | 0.64 J | 1.9 J | 0.21 J | 0.62 J | 1.2 | 3.4 | 0.38 J | 1.1 J | 0.70 J | 2.1 J | 0.75 | 2.2 | 0.37 J | 1.1 J | 1.4 | 4.0 | 1.3 | 3.9 | 1.5 | 4.5 | 0.22 J | 0.63 J | 0.49 J | 1.4 J | 1.1 | 3.3 | 0.41 J | 1.2 J |
| cis-1,2-Dichloroethene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Tetrahydrofuran | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.18 J | 0.53 J | 0.21 J | 0.61 J | 0.26 J | 0.76 J | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Chloroform | ND | ND | 0.030 J | 0.14 J | ND | ND | 0.19 J | 0.92 J | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.18 J | 0.87 J | 0.048 J | 0.23 J | ND | ND | ND | ND |
| 1,1,1-Trichloroethane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.23 J | 1.3 J | ND | ND | 0.24 J | 1.3 J | ND | ND |
| Cyclohexane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.32 | 1.1 | ND | ND | 0.38 | 1.3 | 0.43 | 1.5 | 0.071 J | 0.24 J | ND | ND | ND | ND | 0.078 J | 0.27 J | ND | ND | 0.054 J | 0.18 J | ND | ND | ND | ND |
| Carbon Tetrachloride | 0.081 J | 0.51 J | 0.088 J | 0.56 J | ND | ND | ND | ND | 0.077 J | 0.48 J | 0.081 J | 0.51 J | 0.078 J | 0.49 J | 0.086 J | 0.54 J | 0.059 J | 0.37 J | 0.072 J | 0.45 J | 0.070 J | 0.44 J | 0.034 J | 0.21 J | 0.044 J | 0.28 J | 0.068 J | 0.43 J | 0.044 J | 0.27 J | 0.069 J | 0.44 J | ND | ND | 0.070 J | 0.44 J |
| 2,2,4-Trimethylpentane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.39 J | 1.8 J | 0.073 J | 0.34 J | 0.74 | 3.5 | 0.76 | 3.5 | 0.31 J | 1.4 J | 0.15 J | 0.69 J | ND | ND | 0.12 J | 0.55 J | ND | ND | 0.11 J | 0.53 J | ND | ND | ND | ND |
| Benzene | 0.16 J | 0.50 J | 0.22 | 0.69 | ND | ND | 1.8 | 5.6 | 0.13 J | 0.41 J | 0.14 J | 0.45 J | 0.99 | 3.2 | 0.14 J | 0.44 J | 1.3 | 4.1 | 1.3 | 4.2 | 0.25 | 0.80 | 0.15 J | 0.48 J | 0.14 J | 0.44 J | 0.42 | 1.3 | ND | ND | 0.16 J | 0.50 J | 0.091 J | 0.29 J | 0.14 J | 0.43 J |
| 1,2-Dichloroethane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.27 | 1.1 | ND | ND | ND | ND |
| Heptane | ND | ND | 0.070 J | 0.29 J | ND | ND | ND | ND | ND | ND | ND | ND | 0.80 | 3.3 | 0.078 J | 0.32 J | 0.91 | 3.7 | 0.93 | 3.8 | 0.27 | 1.1 | ND | ND | 0.046 J | 0.19 J | 0.20 | 0.84 | ND | ND | ND | ND | ND | ND | ND | ND |
| Trichloroethene | ND | ND | ND | ND | ND | ND | 0.53 J | 2.8 J | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.21 | 1.1 | 0.20 | 1.1 | 0.26 | 1.4 | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dichloropropane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,4-Dioxane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.12 J | 0.45 J | ND | ND | ND | ND | ND | ND | ND | ND | 0.084 J | 0.30 J | ND | ND | ND | ND | ND J | ND J | ND J | ND J | 0.40 J+ | 1.5 J+ | ND | ND |
| Bromodichloromethane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| cis-1,3-Dichloropropene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 4-Methyl-2-pentanone | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.042 J | 0.17 J | 0.042 J | 0.17 J | 0.025 J | 0.10 J | 0.028 J | 0.11 J | ND | ND | 0.036 J | 0.15 J | 0.038 J | 0.16 J | 0.028 J | 0.12 J | ND | ND | ND | ND | ND | ND | ND | ND |
| Toluene | 0.42 | 1.6 | 0.50 | 1.9 | ND | ND | 0.35 J | 1.3 J | 0.27 | 1.0 | 0.28 | 1.1 | 1.5 | 5.6 | 0.20 | 0.77 | 3.0 | 11 | 3.1 | 12 | 1.0 | 3.9 | 0.22 | 0.83 | 0.20 | 0.75 | 0.81 | 3.0 | 0.090 J | 0.34 J | 0.92 | 3.4 | 0.25 | 0.94 | 0.66 | 2.5 |
| trans-1,3-Dichloropropene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,2-Trichloroethane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Tetrachloroethene | ND | ND | 2.2 | 15 | 1,100 | 7,800 | 240 | 1,600 | 1.5 | 10 | 1.2 | 8.5 | ND | ND | ND | ND | 0.039 J | 0.27 J | 0.022 J | 0.15 J | 0.037 J | 0.25 J | 17 | 110 | 17 | 120 | 21 | 140 | 0.50 | 3.4 | 0.034 J | 0.23 J | 0.58 | 3.9 | ND | ND |
| 2-Hexanone | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.12 J | 0.47 J | ND | ND | 0.049 J | 0.20 J | 0.061 J | 0.25 J | ND | ND | ND | ND | ND | ND | 0.070 J | 0.29 J | ND | ND | ND | ND | 0.13 J | 0.55 J | ND | ND |
| Dibromochloromethane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dibromoethane (EDB) | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Chlorobenzene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.040 J | 0.18 J | 0.046 J | 0.21 J | 0.041 J | 0.19 J | ND | ND | ND | ND | ND | ND | ND | ND |
| Ethyl Benzene | ND | ND | 0.038 J | 0.16 J | ND | ND | ND | ND | ND | ND | ND | ND | 0.65 | 2.8 | ND | ND | 0.54 | 2.4 | 0.51 | 2.2 | 0.24 | 1.0 | 0.068 J | 0.29 J | ND | ND | 0.11 J | 0.49 J | ND | ND | 0.038 J | 0.17 J | ND | ND | ND | ND |
| m,p-Xylene | 0.12 J | 0.52 J | 0.15 J | 0.67 J | ND | ND | ND | ND | 0.072 J | 0.31 J | 0.14 J | 0.62 J | 1.0 | 4.6 | 0.089 J | 0.39 J | 2.0 | 8.9 | 2.1 | 9.2 | 0.94 | 4.1 | 0.17 J | 0.75 J | 0.15 J | 0.66 J | 0.51 | 2.2 | ND | ND | 0.17 J | 0.73 J | 0.095 J | 0.41 J | 0.16 J | 0.69 J |
| o-Xylene | 0.052 J | 0.23 J | 0.055 J | 0.24 J | ND | ND | 0.38 J | 1.6 J | ND | ND | 0.049 J | 0.21 J | 0.31 | 1.4 | 0.035 J | 0.15 J | 0.66 | 2.9 | 0.72 | 3.1 | 0.31 | 1.4 | 0.21 | 0.93 | 0.24 | 1.1 | 0.41 | 1.8 | ND | ND | 0.069 J | 0.30 J | ND | ND | 0.068 J | 0.29 J |
| Styrene | ND | ND | 0.040 J | 0.17 J | ND | ND | ND | ND | ND | ND | ND | ND | 0.14 J | 0.58 J | 0.034 J | 0.14 J | 0.088 J | 0.38 J | 0.092 J | 0.39 J | 0.054 J | 0.23 J | 0.034 J | 0.14 J | 0.060 J | 0.26 J | 0.083 J | 0.35 J | ND | ND | 0.044 J | 0.19 J | ND | ND | ND | ND |
| Bromoform | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Cumene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.070 J | 0.34 J | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.032 J | 0.16 J | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,2,2-Tetrachloroethane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Propylbenzene | ND | ND | ND | ND | ND | ND | 0.34 J | 1.7 J | ND | ND | ND | ND | 0.18 J | 0.88 J | ND | ND | 0.088 J | 0.43 J | 0.10 J | 0.50 J | 0.063 J | 0.31 J | 0.10 J | 0.50 J | 0.18 | 0.88 | 0.26 | 1.3 | ND | ND | ND | ND | ND | ND | ND | ND |
| 4-Ethyltoluene | 0.078 J | 0.38 J | 0.074 J | 0.36 J | ND | ND | 0.31 J | 1.5 J | ND | ND | 0.045 J | 0.22 J | 0.24 | 1.2 | 0.095 J | 0.47 J | 0.44 | 2.2 | 0.44 | 2.2 | 0.22 | 1.1 | 0.029 J | 0.14 J | 0.057 J | 0.28 J | 0.13 J | 0.64 J | ND | ND | 0.059 J | 0.29 J | ND | ND | ND | ND |
| 1,3,5-Trimethylbenzene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.097 J | 0.48 J | ND | ND | 0.14 | 0.67 | 0.15 | 0.75 | 0.070 J | 0.35 J | ND | ND | 0.039 J | 0.19 J | 0.042 J | 0.20 J | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2,4-Trimethylbenzene | 0.088 J | 0.43 J | 0.065 J | 0.32 J | ND | ND | ND | ND | ND | ND | 0.047 J | 0.23 J | 0.68 | 3.3 | 0.067 J | 0.33 J | 0.42 | 2.1 | 0.43 | 2.1 | 0.22 | 1.1 | 0.046 J | 0.23 J | 0.065 J | 0.32 J | 0.12 J | 0.61 J | ND | ND | 0.068 J | 0.33 J | 0.10 J | 0.49 J | 0.051 J | 0.25 J |
| 1,3-Dichlorobenzene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,4-Dichlorobenzene | ND | ND | ND | ND | ND | ND | 0.74 J | 4.4 J | ND | ND | ND | ND | 0.065 J | 0.39 J | ND | ND | ND | ND | ND | ND | ND | ND | 0.16 J | 0.93 J | 0.60 | 3.6 | 0.66 | 4.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| alpha-Chlorotoluene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dichlorobenzene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2,4-Trichlorobenzene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Hexachlorobutadiene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |

**Notes:**

Exceeds indoor air EPA Regional Screening Level and Vapor Intrusion Screening Level Calculator values for target hazard quotient of 1 and target risk of 1E-06

Exceeds sub-slab EPA Regional Screening Level and Vapor Intrusion Screening Level Calculator values for target hazard quotient of 1 and target risk of 1E-06

J = Estimated value

J+ = Estimated value, may be biased high

ND = Non detect

NR = Not reported

R = Data are unusable

E = Exceeds insturment calibration range

**TABLE 5**

**ANALYTICAL RESULTS FOR VOLATILE ORGANIC COMPOUNDS IN VAPOR INTRUSION SAMPLES**
**AUGUST 2012 AND APRIL - MAY 2013**

| Sample Location: | 38 | | | | | | 39 | | | | | | 41 | | | | | | | | 42 | | | | | | | | 43 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Property Use: | Residential | | | | | | Commercial | | | | | | Residential | | | | | | | | Residential | | | | | | | | Residential | | | |
| Field Sample ID: | AA-001-38-0812 | | IA-002-38-0812 | | IA-001-38-0812 | | SS-001-39-0812 | | IA-001-39-0812 | | SS-002-39-0812 | | AA-001-41-0413 | | IA-001-41-0413 | | SS-001-41-0413 | | SS-002-41-0413 | | AA-001-42-0413 | | IA-001-42-0413 | | SS-001-42-0413 | | SS-002-42-0413 | | AA-001-43-0413 | | IA-001-43-0413 | |
| Lab Sample ID: | 1208556-01A | | 1208556-02A | | 1208556-04A | | 1208556-03A | | 1208557-10A | | 1208557-13A | | 1304411-01A | | 1304411-02A | | 1304411-03A | | 1304411-04A | | 1304411-08A | | 1304411-07A | | 1304411-06A | | 1304411-05A | | 1304410-09A | | 1304410-08A | |
| Sample Type: | Ambient Air | | Indoor Air | | Indoor Air | | Sub-Slab | | Indoor Air | | Sub-Slab | | Ambient Air | | Indoor Air | | Sub-Slab | | Sub-Slab | | Ambient Air | | Indoor Air | | Sub-Slab | | Sub-Slab | | Ambient Air | | Indoor Air | |
| Sample Date: | 8/23/2012 | | 8/23/2012 | | 8/23/2012 | | 8/23/2012 | | 8/23/2012 | | 8/23/2012 | | 4/12/2013 | | 4/12/2013 | | 4/12/2013 | | 4/12/2013 | | 4/12/2013 | | 4/12/2013 | | 4/12/2013 | | 4/12/2013 | | 4/12/2013 | | 4/12/2013 | |
| Concentration Detected in: | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 |
| **Volatile Organic Compound** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Freon 12 | 0.48 | 2.4 | 0.35 | 1.8 | 0.46 | 2.3 | 0.46 | 2.2 | 0.46 | 2.3 | 0.47 | 2.3 | 0.48 J | 2.4 | 0.47 | 2.3 | 0.47 | 2.3 | 0.52 J | 2.6 J | 0.48 | 2.4 | 0.62 | 3.1 | 0.47 | 2.3 | 0.48 | 2.4 | 0.48 | 2.4 | 0.51 | 2.5 |
| Freon 114 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Chloromethane | 0.48 | 0.98 | 0.46 | 0.96 | 0.50 | 1.0 | ND | ND | 0.46 | 0.95 | 0.088 J | 0.18 J | 0.54 | 1.1 | 0.33 | 0.69 | 0.12 J | 0.25 J | ND | ND | 0.63 | 1.3 | 0.32 | 0.67 | 0.12 J | 0.24 J | ND | ND | 0.51 | 1.1 | 0.43 | 0.88 |
| Vinyl Chloride | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,3-Butadiene | ND | ND | ND | ND | ND | ND | ND | ND | 0.064 J | 0.14 J | ND | ND | 0.032 J | 0.070 J | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.032 J | 0.070 J |
| Bromomethane | ND | ND | ND | ND | ND | ND | ND | ND | 0.13 J | 0.50 J | 0.13 J | 0.49 J | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Chloroethane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Freon 11 | 0.19 | 1.1 | 0.19 | 1.1 | 0.21 | 1.2 | 0.23 | 1.3 | 0.20 | 1.1 | 0.23 | 1.3 | 0.21 | 1.2 | 0.22 | 1.2 | 0.22 | 1.2 | ND | ND | 0.20 | 1.1 | 0.25 | 1.4 | 0.20 | 1.2 | 0.23 | 1.3 | 0.21 | 1.2 | 0.20 | 1.2 |
| Ethanol | 5.6 J+ | 10 J+ | 20 J+ | 38 J+ | 18 J+ | 34 J+ | 1.5 J+ | 2.9 J+ | 8.8 | 16 | 1.7 | 3.1 | 24 | 46 | 3.2 | 6.0 | 29 | 54 | 21 | 39 | 1.2 | 2.2 | 0.70 J | 1.3 J | 14 | 25 | 16 | 29 | 0.96 | 1.8 | 2.0 | 3.7 |
| Freon 113 | 0.071 J | 0.55 J | 0.062 J | 0.47 J | 0.064 J | 0.49 J | 0.059 J | 0.45 J | 0.051 J | 0.39 J | 0.082 J | 0.63 J | 0.061 J | 0.47 J | 0.061 J | 0.47 J | 0.056 J | 0.43 J | ND | ND | 0.061 J | 0.47 J | 0.071 J | 0.54 J | 0.066 J | 0.51 J | 0.074 J | 0.56 J | 0.057 J | 0.44 J | 0.068 J | 0.52 J |
| 1,1-Dichloroethene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Acetone | 6.6 | 16 | 11 | 27 | 11 | 26 | 3.5 | 8.3 | 8.9 | 21 | 3.9 | 9.3 | 9.0 | 21 | 5.3 | 12 | 6.9 | 16 | 5.5 J | 13 J | 3.1 | 7.3 | 2.2 | 5.3 | 4.1 | 9.7 | 5.2 | 12 | 2.7 | 6.5 | 3.4 | 8.0 |
| 2-Propanol | 11 | 28 | ND | ND | ND | ND | ND | ND | 0.55 J | 1.4 J | 0.39 J | 0.96 J | 10 | 25 | 0.29 J | 0.71 J | 11 | 26 | 6.2 J | 15 J | 0.30 J | 0.73 J | 0.16 J | 0.39 J | 1.9 | 4.6 | 5.6 | 14 | 0.21 J | 0.52 J | 0.41 J | 1.0 J |
| Carbon Disulfide | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.092 J | 0.28 J | ND | ND | ND | ND | 0.70 J | 2.2 J | 0.10 J | 0.32 J | ND | ND | ND | ND | ND | ND |
| 3-Chloropropene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Methylene Chloride | 0.13 J | 0.44 J | 15 | 51 | 12 | 42 | 0.082 J | 0.28 J | ND | ND | 0.19 J | 0.68 J | 0.083 J | 0.29 J | 0.16 J | 0.57 J | 0.24 J | 0.82 J | ND | ND | 0.13 J | 0.45 J | 1.4 | 4.8 | 0.090 J | 0.31 J | 0.083 J | 0.29 J | 0.12 J | 0.42 J | 0.13 J | 0.46 J |
| Methyl tert-butyl ether | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| trans-1,2-Dichloroethene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Hexane | 0.27 J+ | 0.95 J+ | 0.26 J+ | 0.92 J+ | 0.28 J+ | 0.98 J+ | ND | ND | 0.31 | 1.1 | ND | ND | ND | ND | 0.76 | 2.7 | 1.1 | 4.0 | ND | ND | ND | ND | 0.16 J+ | 0.58 J+ | 1.3 | 4.5 | 0.20 J+ | 0.72 J+ | ND | ND | ND | ND |
| 1,1-Dichloroethane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 2-Butanone (Methyl Ethyl Ketone) | 0.76 J | 2.2 J | 1.7 | 5.0 | 1.3 | 3.8 | 0.29 J | 0.86 J | 0.70 J | 2.1 J | 0.46 J | 1.4 J | 2.9 | 8.7 | 0.56 J | 1.7 J | 3.0 | 8.7 | ND | ND | 0.31 J | 0.91 J | 0.73 J | 2.2 J | 0.86 | 2.5 | 2.0 | 5.9 | 0.37 J | 1.1 J | 0.29 J | 0.85 J |
| cis-1,2-Dichloroethene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Tetrahydrofuran | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.090 J | 0.26 J | 0.063 J | 0.19 J | ND | ND | ND | ND | 0.13 J | 0.38 J | ND | ND | ND | ND | ND | ND | ND | ND |
| Chloroform | ND | ND | ND | ND | 0.037 J | 0.18 J | ND | ND | ND | ND | ND | ND | ND | ND | 0.024 J | 0.12 J | ND | ND | ND | ND | ND | ND | ND | ND | 0.033 J | 0.16 J | 0.12 J | 0.61 J | ND | ND | 0.019 J | 0.094 J |
| 1,1,1-Trichloroethane | ND | ND | ND | ND | ND | ND | 0.086 J | 0.47 J | ND | ND | 0.038 J | 0.21 J | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.81 | 4.4 | ND | ND | 0.035 J | 0.19 J | ND | ND | ND | ND |
| Cyclohexane | 0.040 J | 0.14 J | 0.064 J | 0.22 J | 0.058 J | 0.20 J | 0.028 J | 0.098 J | 0.41 | 1.4 | 0.042 J | 0.14 J | ND | ND | 0.12 J | 0.40 J | 0.21 | 0.73 | ND | ND | ND | ND | 0.066 J | 0.23 J | 0.14 | 0.50 | 0.040 J | 0.14 J | ND | ND | ND | ND |
| Carbon Tetrachloride | 0.077 J | 0.48 J | 0.072 J | 0.46 J | 0.072 J | 0.45 J | 0.068 J | 0.43 J | 0.084 J | 0.53 J | 0.065 J | 0.41 J | 0.071 J | 0.45 J | 0.086 J | 0.54 J | 0.053 J | 0.33 J | ND | ND | 0.075 J | 0.47 J | 0.076 J | 0.48 J | 0.080 J | 0.50 J | 0.063 J | 0.40 J | 0.091 J | 0.58 J | 0.081 J | 0.51 J |
| 2,2,4-Trimethylpentane | 0.067 J | 0.31 J | 0.068 J | 0.32 J | 0.056 J | 0.26 J | ND | ND | 0.14 J | 0.66 J | ND | ND | ND | ND | 0.19 J | 0.90 J | 0.18 J | 0.83 J | ND | ND | ND | ND | 0.073 J | 0.34 J | 0.19 J | 0.88 J | 0.055 J | 0.26 J | 0.058 J | 0.27 J | 0.051 J | 0.24 J |
| Benzene | 1.0 | 3.2 | ND | ND | 0.17 | 0.56 | ND | ND | 0.18 | 0.58 | 0.061 J | 0.19 J | 1.8 | 5.6 | 0.22 | 0.70 | 0.54 | 1.7 | ND | ND | 0.13 J | 0.41 J | 0.14 J | 0.43 J | 0.59 | 1.9 | 0.22 | 0.71 | 0.14 J | 0.44 J | 0.14 | 0.44 |
| 1,2-Dichloroethane | ND | ND | 0.059 J | 0.24 J | 0.050 J | 0.20 J | ND | ND | 0.66 J+ | 2.7 J+ | ND | ND | ND | ND | 0.053 J | 0.22 J | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Heptane | 0.088 J | 0.36 J | 0.10 J | 0.41 J | 0.096 J | 0.39 J | ND | ND | 0.24 | 0.96 | ND | ND | 0.061 J | 0.25 J | 0.38 | 1.6 | 0.32 | 1.3 | ND | ND | 0.052 J | 0.21 J | 0.36 | 1.5 | 0.37 | 1.5 | 0.14 J | 0.56 J | 0.060 J | 0.25 J | 0.049 J | 0.20 J |
| Trichloroethene | 0.027 J | 0.15 J | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.42 | 2.3 | ND | ND | 0.51 | 2.7 | 1.0 J | 5.4 J | ND | ND | ND | ND | 0.22 | 1.2 | 0.26 | 1.4 | ND | ND | ND | ND |
| 1,2-Dichloropropane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,4-Dioxane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.47 | 1.7 | ND | ND | ND | ND | ND | ND | 1.7 | 6.1 | ND | ND | ND | ND | ND | ND | ND | ND |
| Bromodichloromethane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.14 J | 0.96 J | ND | ND | ND | ND |
| cis-1,3-Dichloropropene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 4-Methyl-2-pentanone | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.049 J | 0.20 J | 0.037 J | 0.15 J | 0.060 J | 0.24 J | ND | ND | ND | ND | ND | ND | 0.031 J | 0.12 J | 0.030 J | 0.12 J | 0.042 J | 0.17 J | 0.024 J | 0.10 J |
| Toluene | 0.96 | 3.6 | 8.3 | 31 | 9.9 | 37 | ND | ND | 1.1 | 4.0 | 0.16 J | 0.61 J | 0.61 | 2.3 | 0.68 | 2.5 | 1.2 | 4.4 | 0.60 J | 2.3 J | 0.22 | 0.85 | 1.3 | 4.8 | 0.89 | 3.4 | 0.39 | 1.5 | 0.18 | 0.70 | 0.21 | 0.79 |
| trans-1,3-Dichloropropene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,2-Trichloroethane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Tetrachloroethene | 0.020 J | 0.14 J | 0.086 J | 0.58 J | 0.10 J | 0.68 J | 0.19 | 1.3 | ND | ND | 0.22 | 1.5 | 0.17 | 1.1 | 17 | 110 | 27 | 180 | 1,300 | 8,600 | ND | ND | 0.51 | 3.5 | 3.0 | 21 | 13 | 86 | ND | ND | ND | ND |
| 2-Hexanone | ND | ND | ND | ND | ND | ND | ND | ND | 0.060 J | 0.25 J | ND | ND | 0.060 J | 0.25 J | ND | ND | 0.064 J | 0.26 J | ND | ND | ND | ND | ND | ND | 0.071 J | 0.29 J | 0.13 J | 0.54 J | ND | ND | ND | ND |
| Dibromochloromethane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.067 J | 0.57 J | ND | ND | ND | ND |
| 1,2-Dibromoethane (EDB) | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Chlorobenzene | 0.25 | 1.1 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.076 J | 0.35 J | ND | ND | 0.079 J | 0.36 J | ND | ND | ND | ND | ND | ND | 0.030 J | 0.14 J | 0.054 J | 0.25 J | ND | ND | ND | ND |
| Ethyl Benzene | 0.088 J | 0.38 J | 0.19 | 0.81 | 0.16 J | 0.68 J | ND | ND | 0.074 J | 0.32 J | ND | ND | 0.090 J | 0.39 J | 0.10 J | 0.45 J | 0.26 | 1.1 | ND | ND | ND | ND | 0.44 | 1.9 | 0.16 | 0.69 | 0.10 J | 0.45 J | 0.042 J | 0.18 J | ND | ND |
| m,p-Xylene | 0.29 | 1.2 | 0.58 | 2.5 | 0.50 | 2.2 | 0.025 J | 0.11 J | 0.23 | 1.0 | 0.11 J | 0.47 J | 0.29 | 1.3 | 0.36 | 1.5 | 0.78 | 3.4 | ND | ND | 0.11 J | 0.46 J | 1.3 | 5.6 | 0.57 | 2.5 | 0.24 | 1.0 | 0.064 J | 0.28 J | 0.12 J | 0.51 J |
| o-Xylene | 0.18 | 0.78 | 0.19 | 0.82 | 0.16 J | 0.68 J | ND | ND | 0.080 J | 0.35 J | 0.038 J | 0.16 J | 0.51 | 2.2 | 0.12 J | 0.54 J | 0.74 | 3.2 | ND | ND | 0.040 J | 0.18 J | 0.41 | 1.8 | 0.34 | 1.5 | 0.36 | 1.6 | 0.034 J | 0.15 J | 0.038 J | 0.17 J |
| Styrene | 0.054 J | 0.23 J | 0.081 J | 0.34 J | 0.055 J | 0.23 J | ND | ND | 0.055 J | 0.24 J | ND | ND | 0.12 J | 0.51 J | 0.060 J | 0.26 J | 0.14 J | 0.60 J | ND | ND | 0.044 J | 0.19 J | 0.055 J | 0.23 J | 0.078 J | 0.33 J | 0.097 J | 0.41 J | ND | ND | ND | ND |
| Bromoform | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Cumene | ND | ND | ND | ND | ND | ND | ND | ND | 0.088 J | 0.43 J | ND | ND | 0.026 J | 0.12 J | ND | ND | 0.052 J | 0.26 J | ND | ND | ND | ND | ND | ND | 0.032 J | 0.16 J | 0.034 J | 0.17 J | ND | ND | ND | ND |
| 1,1,2,2-Tetrachloroethane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Propylbenzene | 0.11 J | 0.54 J | ND | ND | ND | ND | ND | ND | 0.060 J | 0.30 J | ND | ND | 0.32 | 1.6 | 0.031 J | 0.15 J | 0.42 | 2.0 | ND | ND | ND | ND | 0.058 J | 0.28 J | 0.16 | 0.78 | 0.25 | 1.2 | ND | ND | ND | ND |
| 4-Ethyltoluene | 0.072 J | 0.35 J | 0.064 J | 0.32 J | 0.064 J | 0.31 J | ND | ND | 0.083 J | 0.41 J | ND | ND | 0.069 J | 0.34 J | 0.098 J | 0.48 J | 0.19 | 0.94 | ND | ND | 0.050 J | 0.24 J | 0.15 | 0.76 | 0.13 | 0.63 | 0.068 J | 0.33 J | 0.063 J | 0.31 J | 0.062 J | 0.31 J |
| 1,3,5-Trimethylbenzene | ND | ND | ND | ND | ND | ND | ND | ND | 0.047 J | 0.23 J | ND | ND | 0.050 J | 0.25 J | 0.047 J | 0.23 J | 0.059 J | 0.29 J | ND | ND | ND | ND | 0.096 J | 0.47 J | 0.052 J | 0.26 J | 0.041 J | 0.20 J | ND | ND | ND | ND |
| 1,2,4-Trimethylbenzene | 0.097 J | 0.48 J | 0.087 J | 0.43 J | 0.080 J | 0.40 J | ND | ND | 0.12 J | 0.59 J | ND | ND | 0.068 J | 0.33 J | 0.14 J | 0.67 J | 0.21 | 1.0 | ND | ND | ND | ND | 0.28 | 1.4 | 0.16 | 0.81 | 0.094 J | 0.46 J | 0.067 J | 0.33 J | 0.061 J | 0.30 J |
| 1,3-Dichlorobenzene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,4-Dichlorobenzene | 1.6 | 9.9 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.69 | 4.1 | ND | ND | 0.71 | 4.3 | 1.3 J | 8.1 J | ND | ND | ND | ND | 0.43 | 2.6 | 0.58 | 3.5 | ND | ND | ND | ND |
| alpha-Chlorotoluene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dichlorobenzene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2,4-Trichlorobenzene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Hexachlorobutadiene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |

**Notes:**

Exceeds indoor air EPA Regional Screening Level and Vapor Intrusion Screening Level Calculator values for target hazard quotient of 1 and target risk of 1E-06

Exceeds sub-slab EPA Regional Screening Level and Vapor Intrusion Screening Level Calculator values for target hazard quotient of 1 and target risk of 1E-06

J = Estimated value

J+ = Estimated value, may be biased high

ND = Non detect

NR = Not reported

R = Data are unusable

E = Exceeds insturment calibration range

**TABLE 5**

**ANALYTICAL RESULTS FOR VOLATILE ORGANIC COMPOUNDS IN VAPOR INTRUSION SAMPLES**
**AUGUST 2012 AND APRIL - MAY 2013**

| Sample Location: | 44 | | | | | | 45 | | | | | | | | 46 | | | | | | 47 | | | | | | 48 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Property Use: | Residential | | | | | | Residential | | | | | | | | Residential | | | | | | Residential | | | | | | Commercial | | | | | |
| Field Sample ID: | IA-001-44-0413 | | SS-001-44-0413 | | SS-002-44-0413 | | AA-001-45-0413 | | IA-001-45-0413 | | SS-001-45-0413 | | SS-002-45-0413 | | AA-001-46-0513 | | IA-001-46-0513 | | SS-001-46-0513 | | IA-001-47-0413 | | SS-001-47-0413 | | SS-002-47-0413 | | AA-001-48-0413 | | SS-001-48-0413 | | SS-002-48-0413 | |
| Lab Sample ID: | 1304412-03A | | 1304412-01A | | 1304412-02A | | 1304412-07A | | 1304412-04A | | 1304412-05A | | 1304412-06A | | 1305096-04A | | 1305096-02A | | 1305096-01A | | 1305096-10A | | 1305096-12A | | 1305096-13A | | 1305096-11A | | 1305096-05A | | 1305096-03A | |
| Sample Type: | Indoor Air | | Sub-Slab | | Sub-Slab | | Ambient Air | | Indoor Air | | Sub-Slab | | Sub-Slab | | Ambient Air | | Indoor Air | | Sub-Slab | | Indoor Air | | Sub-Slab | | Sub-Slab | | Ambient Air | | Sub-Slab | | Sub-Slab | |
| Sample Date: | 4/12/2013 | | 4/12/2013 | | 4/12/2013 | | 4/12/2013 | | 4/12/2013 | | 4/12/2013 | | 4/12/2013 | | 5/1/2013 | | 5/1/2013 | | 5/1/2013 | | 4/26/2013 | | 4/26/2013 | | 4/26/2013 | | 4/26/2013 | | 4/26/2013 | | 4/26/2013 | |
| Concentration Detected in: | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 | ppbv | ug/m3 |
| **Volatile Organic Compound** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Freon 12 | 0.46 | 2.3 | 0.50 | 2.4 | 0.47 | 2.3 | 0.48 | 2.3 | 0.48 | 2.4 | ND | ND | ND | ND | 0.50 | 2.5 | 0.52 | 2.6 | ND | ND | 0.46 | 2.3 | ND | ND | 0.44 J | 2.2 J | 0.52 | 2.6 | ND | ND | ND | ND |
| Freon 114 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Chloromethane | 0.49 | 1.0 | 0.053 J | 0.11 J | 0.099 J | 0.20 J | 0.61 | 1.3 | 0.67 | 1.4 | 0.57 J | 1.2 J | 0.44 J | 0.91 J | 0.52 | 1.1 | 0.53 | 1.1 | ND | ND | 0.53 | 1.1 | ND | ND | ND | ND | 0.49 | 1.0 | ND | ND | ND | ND |
| Vinyl Chloride | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,3-Butadiene | ND | ND | ND | ND | ND | ND | 0.088 J | 0.19 J | 0.32 | 0.70 | 0.25 J | 0.56 J | ND | ND | ND | ND | ND | ND | ND | ND | 0.075 J | 0.17 J | ND | ND | ND | ND | 0.040 J | 0.090 J | ND | ND | ND | ND |
| Bromomethane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Chloroethane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Freon 11 | 0.20 | 1.2 | 0.22 | 1.2 | 0.21 | 1.2 | 0.21 | 1.2 | 0.21 | 1.2 | 0.23 J | 1.3 J | ND | ND | 0.22 | 1.2 | 0.23 | 1.3 | ND | ND | 0.20 | 1.1 | ND | ND | 0.24 J | 1.3 J | 0.22 | 1.2 | ND | ND | ND | ND |
| Ethanol | 3.9 | 7.4 | 17 | 31 | 26 | 49 | 1.7 | 3.2 | 4.0 | 7.5 | 18 | 33 | 130 | 240 | 3.7 | 6.9 | 38 | 72 | 6.5 J | 12 J | 7.3 | 14 | ND | ND | 7.4 | 14 | 2.0 | 3.7 | 5.8 J | 11 J | 21 | 40 |
| Freon 113 | 0.058 J | 0.44 J | 0.059 J | 0.45 J | 0.078 J | 0.60 J | 0.059 J | 0.45 J | 0.065 J | 0.50 J | ND | ND | ND | ND | 0.064 J | 0.49 J | 0.077 J | 0.59 J | ND | ND | 0.066 J | 0.50 J | ND | ND | ND | ND | 0.058 J | 0.44 J | ND | ND | ND | ND |
| 1,1-Dichloroethene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Acetone | 8.9 | 21 | 6.0 | 14 | 8.5 | 20 | 4.2 | 9.9 | 8.0 | 19 | 10 | 24 | 12 | 28 | 3.9 J+ | 9.2 J+ | 9.3 J+ | 22 J+ | ND | ND | 4.1 J+ | 9.8 J+ | ND | ND | 14 J+ | 33 J+ | 2.6 J+ | 6.2 J+ | 12 J+ | 28 J+ | 18 J+ | 44 J+ |
| 2-Propanol | 1.3 | 3.2 | 6.4 | 16 | 11 | 27 | 0.46 J | 1.1 J | 4.1 | 10 | 8.6 | 21 | 12 | 29 | 0.27 J | 0.67 J | 1.1 | 2.7 | 18 | 44 | 4.3 | 11 | 19 J | 46 J | 20 | 50 | 0.30 J | 0.74 J | 23 | 57 | 26 | 64 |
| Carbon Disulfide | ND | ND | 0.071 J | 0.22 J | ND | ND | 0.15 J | 0.47 J | ND | ND | 1.8 J | 5.5 J | 0.86 J | 2.7 J | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.20 J | 0.62 J | ND | ND | ND | ND | ND | ND |
| 3-Chloropropene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Methylene Chloride | 0.076 J | 0.26 J | ND | ND | ND | ND | 0.16 J | 0.54 J | 0.14 J | 0.50 J | ND | ND | 1.4 J | 4.9 J | 0.17 J | 0.58 J | 0.17 J | 0.59 J | ND | ND | 0.12 J | 0.42 J | ND | ND | 0.13 J | 0.44 J | 0.11 J | 0.38 J | ND | ND | ND | ND |
| Methyl tert-butyl ether | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| trans-1,2-Dichloroethene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Hexane | ND | ND | ND | ND | 0.19 | 0.66 | 0.18 | 0.64 | 0.36 | 1.3 | 0.81 | 2.8 | 5.3 | 19 | 0.76 J+ | 2.7 J+ | 0.40 J+ | 1.4 J+ | ND | ND | 0.25 J+ | 0.88 J+ | ND | ND | ND | ND | 0.20 J+ | 0.69 J+ | ND | ND | 2.4 J+ | 8.5 J+ |
| 1,1-Dichloroethane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 2-Butanone (Methyl Ethyl Ketone) | 4.3 | 13 | 2.1 | 6.2 | 3.4 | 10 | 0.54 J | 1.6 J | 0.98 | 2.9 | 2.5 J | 7.3 J | 42 | 120 | 0.42 J | 1.2 J | 0.66 J | 1.9 J | 1.9 J | 5.6 J | 0.28 J | 0.82 J | ND | ND | 3.0 | 9.0 | 0.32 J | 0.95 J | 2.5 J | 7.3 J | 3.2 J | 9.6 J |
| cis-1,2-Dichloroethene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Tetrahydrofuran | 0.68 J | 2.0 J | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.57 J | 1.7 J |
| Chloroform | 0.029 J | 0.14 J | 0.62 | 3.0 | 0.027 J | 0.13 J | ND | ND | 0.046 J | 0.23 J | 4.0 | 20 | 27 | 130 | ND | ND | 0.059 J | 0.29 J | 0.58 J | 2.8 J | ND | ND | ND | ND | ND | ND | ND | ND | 1.2 J | 5.8 J | 2.5 | 12 |
| 1,1,1-Trichloroethane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.066 J | 0.36 J | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 1.2 J | 6.8 J | 0.56 J | 3.0 J |
| Cyclohexane | 0.044 J | 0.15 J | ND | ND | 0.050 J | 0.17 J | 0.034 J | 0.12 J | 0.044 J | 0.15 J | 0.25 J | 0.87 J | 0.84 J | 2.9 J | 0.073 J | 0.25 J | 0.12 J | 0.42 J | ND | ND | 0.050 J | 0.17 J | ND | ND | 0.12 J | 0.42 J | 0.035 J | 0.12 J | ND | ND | 0.65 J | 2.2 J |
| Carbon Tetrachloride | 0.13 J | 0.84 J | 0.029 J | 0.18 J | 0.049 J | 0.31 J | 0.086 J | 0.54 J | 0.063 J | 0.40 J | 0.13 J | 0.84 J | ND | ND | 0.072 J | 0.45 J | 0.076 J | 0.48 J | ND | ND | 0.076 J | 0.48 J | ND | ND | ND | ND | 0.078 J | 0.49 J | ND | ND | ND | ND |
| 2,2,4-Trimethylpentane | 0.12 J | 0.58 J | ND | ND | 0.093 J | 0.44 J | 0.057 J | 0.27 J | 0.090 J | 0.42 J | 0.17 J | 0.79 J | 0.98 J | 4.6 J | 0.28 J | 1.3 J | 0.13 J | 0.63 J | ND | ND | 0.075 J | 0.35 J | ND | ND | ND | ND | 0.055 J | 0.26 J | ND | ND | 0.54 J | 2.5 J |
| Benzene | 0.15 J | 0.48 J | 0.23 | 0.73 | 0.47 | 1.5 | 0.20 | 0.65 | 0.32 | 1.0 | 1.7 | 5.3 | 1.1 J | 3.6 J | 0.24 | 0.76 | 0.26 | 0.82 | 0.97 J | 3.1 J | 0.17 | 0.53 | 1.3 J | 4.2 J | 0.52 J | 1.7 J | 0.21 | 0.68 | 0.69 J | 2.2 J | 1.2 J | 3.9 J |
| 1,2-Dichloroethane | 1.2 | 4.7 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.047 J | 0.19 J | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Heptane | 0.14 J | 0.56 J | 0.039 J | 0.16 J | 0.12 J | 0.51 J | 0.099 J | 0.41 J | 0.19 | 0.78 | 0.66 J | 2.7 J | 1.4 | 5.8 | 0.38 | 1.6 | 0.34 | 1.4 | ND | ND | 0.33 | 1.3 | ND | ND | 0.24 J | 0.98 J | ND | ND | ND | ND | 1.8 | 7.6 |
| Trichloroethene | ND | ND | 2.8 | 15 | 0.57 | 3.1 | ND | ND | ND | ND | 0.66 J | 3.6 J | 0.86 J | 4.6 J | ND | ND | ND | ND | ND | ND | ND | ND | 2.3 J | 13 J | ND | ND | ND | ND | 0.66 J | 3.6 J | 1.5 | 8.2 |
| 1,2-Dichloropropane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,4-Dioxane | 0.17 J | 0.60 J | 0.058 J | 0.21 J | 0.11 J | 0.39 J | 0.068 J | 0.25 J | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Bromodichloromethane | ND | ND | 0.065 J | 0.43 J | ND | ND | ND | ND | ND | ND | 0.28 J | 1.8 J | 1.7 | 11 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| cis-1,3-Dichloropropene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 4-Methyl-2-pentanone | 0.053 J | 0.22 J | 0.041 J | 0.17 J | 0.033 J | 0.13 J | 0.039 J | 0.16 J | 0.035 J | 0.14 J | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.14 J | 0.59 J | ND | ND | ND | ND | ND | ND |
| Toluene | 0.54 | 2.0 | 0.29 | 1.1 | 0.59 | 2.2 | 0.36 | 1.4 | 0.65 | 2.4 | 1.7 | 6.5 | 1.6 | 6.0 | 0.82 | 3.1 | 1.4 | 5.4 | 0.75 J | 2.8 J | 0.42 | 1.6 | 1.5 J | 5.8 J | 1.3 | 5.0 | 0.75 | 2.8 | 0.64 J | 2.4 J | 4.3 | 16 |
| trans-1,3-Dichloropropene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,2-Trichloroethane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Tetrachloroethene | 0.071 J | 0.48 J | 29 | 200 | 2.5 | 17 | 0.063 J | 0.43 J | 3.3 | 22 | 150 | 1000 | 22 | 150 | 0.031 J | 0.21 J | 5.3 | 36 | 550 | 3800 | 0.18 | 1.2 | 1000 | 7000 | 140 | 930 | ND | ND | 680 | 4600 | 470 | 3200 |
| 2-Hexanone | 0.077 J | 0.32 J | 0.071 J | 0.29 J | 0.093 J | 0.38 J | 0.064 J | 0.26 J | 0.076 J | 0.31 J | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Dibromochloromethane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.24 J | 2.0 J | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dibromoethane (EDB) | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Chlorobenzene | ND | ND | 0.048 J | 0.22 J | 0.072 J | 0.33 J | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Ethyl Benzene | 0.14 J | 0.62 J | 0.061 J | 0.27 J | 0.15 J | 0.64 J | 0.054 J | 0.24 J | 0.13 J | 0.55 J | 0.38 J | 1.6 J | 0.34 J | 1.5 J | 0.12 J | 0.51 J | 0.16 J | 0.69 J | ND | ND | 0.056 J | 0.24 J | ND | ND | 0.28 J | 1.2 J | 0.057 J | 0.25 J | ND | ND | 0.64 J | 2.8 J |
| m,p-Xylene | 0.36 | 1.6 | 0.21 | 0.91 | 0.35 | 1.5 | 0.15 J | 0.67 J | 0.41 | 1.8 | 0.88 | 3.8 | 0.90 J | 3.9 J | 0.41 | 1.8 | 0.51 | 2.2 | ND | ND | 0.18 | 0.80 | ND | ND | 0.68 | 2.9 | 0.20 | 0.89 | ND | ND | 2.0 | 8.7 |
| o-Xylene | 0.10 J | 0.45 J | 0.32 | 1.4 | 0.55 | 2.4 | 0.091 J | 0.40 J | 0.19 | 0.81 | 0.60 J | 2.6 J | 0.84 J | 3.6 J | 0.15 J | 0.65 J | 0.16 J | 0.71 J | ND | ND | 0.069 J | 0.30 J | ND | ND | 0.37 J | 1.6 J | 0.073 J | 0.32 J | ND | ND | 0.94 J | 4.1 J |
| Styrene | 0.17 J | 0.72 J | 0.10 J | 0.45 J | 0.13 J | 0.54 J | 0.037 J | 0.16 J | 0.090 J | 0.38 J | 0.12 J | 0.51 J | ND | ND | 0.034 J | 0.14 J | 0.054 J | 0.23 J | ND | ND | ND | ND | ND | ND | ND | ND | 0.029 J | 0.12 J | ND | ND | 0.26 J | 1.1 J |
| Bromoform | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Cumene | 0.044 J | 0.22 J | 0.029 J | 0.14 J | 0.034 J | 0.16 J | ND | ND | 0.061 J | 0.30 J | 0.17 J | 0.84 J | 0.18 J | 0.86 J | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.085 J | 0.42 J | ND | ND | ND | ND | ND | ND |
| 1,1,2,2-Tetrachloroethane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Propylbenzene | ND | ND | 0.25 | 1.2 | 0.36 | 1.8 | 0.030 J | 0.15 J | 0.067 J | 0.33 J | 0.33 J | 1.6 J | 0.53 J | 2.6 J | 0.038 J | 0.18 J | 0.040 J | 0.20 J | ND | ND | ND | ND | ND | ND | 0.23 J | 1.1 J | ND | ND | ND | ND | 0.49 J | 2.4 J |
| 4-Ethyltoluene | 0.057 J | 0.28 J | 0.055 J | 0.27 J | 0.12 J | 0.57 J | 0.067 J | 0.33 J | 0.26 | 1.3 | 0.50 J | 2.5 J | 0.29 J | 1.4 J | 0.15 J | 0.73 J | 0.13 J | 0.64 J | ND | ND | 0.085 J | 0.42 J | ND | ND | 0.22 J | 1.1 J | 0.067 J | 0.33 J | ND | ND | 0.54 J | 2.6 J |
| 1,3,5-Trimethylbenzene | ND | ND | ND | ND | ND | ND | ND | ND | 0.11 J | 0.55 J | 0.17 J | 0.82 J | ND | ND | 0.043 J | 0.21 J | 0.046 J | 0.23 J | ND | ND | 0.033 J | 0.16 J | ND | ND | 0.14 J | 0.67 J | ND | ND | ND | ND | 0.53 J | 2.6 J |
| 1,2,4-Trimethylbenzene | 0.15 J | 0.76 J | 0.086 J | 0.42 J | 0.14 J | 0.68 J | 0.071 J | 0.35 J | 0.26 | 1.3 | 0.43 J | 2.1 J | 0.31 J | 1.5 J | 0.19 | 0.93 | 0.18 | 0.88 | 0.61 J | 3.0 J | 0.12 J | 0.61 J | ND | ND | 0.40 J | 2.0 J | 0.092 J | 0.45 J | ND | ND | 1.1 J | 5.3 J |
| 1,3-Dichlorobenzene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,4-Dichlorobenzene | 0.079 J | 0.47 J | 0.70 | 4.2 | 0.76 | 4.6 | ND | ND | 0.065 J | 0.39 J | 0.51 J | 3.0 J | 0.67 J | 4.0 J | ND | ND | ND | ND | 1.7 | 10 | ND | ND | ND | ND | 1.7 | 10 | ND | ND | 2.3 | 14 | 1.8 | 11 |
| alpha-Chlorotoluene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dichlorobenzene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2,4-Trichlorobenzene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Hexachlorobutadiene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |

**Notes:**

Exceeds indoor air EPA Regional Screening Level and Vapor Intrusion Screening Level Calculator values for target hazard quotient of 1 and target risk of 1E-06

Exceeds sub-slab EPA Regional Screening Level and Vapor Intrusion Screening Level Calculator values for target hazard quotient of 1 and target risk of 1E-06

J = Estimated value

J+ = Estimated value, may be biased high

ND = Non detect

NR = Not reported

R = Data are unusable

E = Exceeds insturment calibration range

**TABLE 6**
**ANALYTICAL RESULTS FOR VOLATILE ORGANIC COMPOUNDS IN SOIL**
**EAST TROY CONTAMINATED AQUIFER**
**FEBRUARY 2013**

| Sample Location | SB001-WAL-05-0213 | SB001-WAL-08-0213 | SB001-WAL-11-0213 | SB002-HOB-01-0213 | SB002-HOB-04-0213 | SB003-HOB-01-0213 | SB003-HOB-04-0213 | SB004-HOB-01-0213 | SB004-HOB-04-0213 | SB005-WAT-01-0213 | SB005-WAT-04-0213 | SB006-SPN-01-0213 | SB006-SPN-04-0213 | SB006-SPN-06-0213 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sample Number** | **E3YR7** | **E3YR8** | **E3YR6** | **E3YS1** | **E3YR9/E3YR9DL** | **E3YS0/E3YS0DL** | **E3YS3/E3YS3DL** | **E3YS4** | **E3YS2** | **E3YS6** | **E3YS5** | **E3YS8** | **E3YS7** | **E3YS9** |
| **Location Description** | **Adjacent to OEPA-11 on E side of Walnut St** | | | **Loading dock area of Hobart Engineering closest to Water St** | | **Loading dock area of Hobart Engineering closest to River** | | **Back side of Hobart Engineering building** | | **Backyard of 423 E Water St** | | **Western end of Spinnaker parking lot extension** | | |
| **Depth (feet)** | 5' | 8' | 11' | 1' | 4' | 1' | 4' | 1' | 4' | 1' | 4' | 1' | 4' | 6' |
| **Sample Type (Grab/Composite)** | Grab | Grab | Grab | Grab | Grab | Grab | Grab | Grab | Grab | Grab | Grab | Grab | Grab | Grab |
| **Sample Date** | 2/13/2013 | 2/13/2013 | 2/13/2013 | 2/13/2013 | 2/13/2013 | 2/13/2013 | 2/13/2013 | 2/13/2013 | 2/13/2013 | 2/13/2013 | 2/13/2013 | 2/13/2013 | 2/13/2013 | 2/13/2013 |
| **Sample Time** | 1010 | 1012 | 1019 | 1100 | 1105 | 1120 | 1125 | 1128 | 1130 | 1355 | 1357 | 1505 | 1510 | 1520 |
| **LABORATORY PARAMETERS:** | | | | | | | | | | | | | | |
| **Volatile Organic Compounds (VOC) - µg/kg** | | | | | | | | | | | | | | |
| Acetone | 10 U | 11 U | 9.2 U | 9.4 U | 22 U | 26 U | 22 U | 10 U | 20 U | 12 U | 11 U | 9.1 U | 9.7 U | 12 U |
| Benzene | 5.2 UJ | 5.7 UJ | 4.6 U | 4.7 UJ | 5.3 U | 6.5 U | 5.7 U | 5.2 U | 4.8 U | 6.2 U | 5.6 UJ | 4.6 U | 4.9 U | 6.2 U |
| Bromochloromethane | 5.2 U | 5.7 U | 4.6 U | 4.7 U | 5.3 U | 6.5 U | 5.7 U | 5.2 U | 4.8 U | 6.2 U | 5.6 U | 4.6 U | 4.9 U | 6.2 U |
| Bromodichloromethane | 5.2 UJ | 5.7 U | 4.6 U | 4.7 U | 5.3 U | 6.5 U | 5.7 U | 5.2 U | 4.8 U | 6.2 U | 5.6 U | 4.6 U | 4.9 U | 6.2 U |
| Bromoform | 5.2 U | 5.7 U | 4.6 U | 4.7 U | 5.3 U | 6.5 U | 5.7 U | 5.2 U | 4.8 U | 6.2 U | 5.6 U | 4.6 U | 4.9 U | 6.2 U |
| Bromomethane | 5.2 U | 5.7 U | 4.6 U | 4.7 U | 5.3 UJ | 6.5 UJ | 5.7 UJ | 5.2 U | 4.8 U | 6.2 U | 5.6 U | 4.6 U | 4.9 U | 6.2 U |
| 2-Butanone | 10 U | 11 U | 9.2 U | 9.4 U | 11 U | 13 U | 11 U | 10 U | 9.5 U | 12 U | 11 U | 9.1 U | 9.7 U | 12 U |
| Carbon disulfide | 5.2 U | 5.7 U | 4.6 U | 4.7 U | 5.3 U | 6.5 U | 5.7 U | 5.2 U | 4.8 U | 6.2 U | 5.6 U | 4.6 U | 4.9 U | 6.2 U |
| Carbon tetrachloride | 5.2 U | 5.7 U | 4.6 U | 4.7 U | 5.3 U | 6.5 U | 5.7 U | 5.2 U | 4.8 U | 6.2 U | 5.6 U | 4.6 U | 4.9 U | 6.2 U |
| Chlorobenzene | 5.2 U | 5.7 U | 4.6 U | 4.7 U | 5.3 U | 6.5 U | 5.7 U | 5.2 U | 4.8 U | 6.2 U | 5.6 UJ | 4.6 U | 4.9 U | 6.2 U |
| Dibromochloromethane | 5.2 U | 5.7 U | 4.6 U | 4.7 U | 5.3 U | 6.5 U | 5.7 U | 5.2 U | 4.8 U | 6.2 U | 5.6 U | 4.6 U | 4.9 U | 6.2 U |
| Chloroethane | 5.2 U | 5.7 U | 4.6 U | 4.7 U | 5.3 U | 6.5 U | 5.7 U | 5.2 U | 4.8 U | 6.2 U | 5.6 U | 4.6 U | 4.9 U | 6.2 U |
| Chloroform | 5.2 U | 5.7 U | 4.6 U | 4.7 U | 5.3 U | 6.5 U | 5.7 U | 5.2 U | 4.8 U | 6.2 U | 5.6 U | 4.6 U | 4.9 U | 6.2 U |
| Chloromethane | 5.2 U | 5.7 U | 4.6 U | 4.7 U | 5.3 U | 6.5 U | 5.7 U | 5.2 U | 4.8 U | 6.2 U | 5.6 U | 4.6 U | 4.9 U | 6.2 U |
| Cyclohexane | 5.2 UJ | 5.7 U | 4.6 U | 4.7 U | 5.3 U | 6.5 U | 5.7 U | 5.2 U | 4.8 U | 6.2 U | 5.6 U | 4.6 U | 4.9 U | 6.2 U |
| 1,2-Dibromo-3-chloro-propane | 5.2 U | 5.7 U | 4.6 U | 4.7 U | 5.3 U | 6.5 U | 5.7 U | 5.2 U | 4.8 U | 6.2 U | 5.6 U | 4.6 U | 4.9 U | 6.2 U |
| 1,2-Dibromoethane | 5.2 U | 5.7 U | 4.6 U | 4.7 U | 5.3 U | 6.5 U | 5.7 U | 5.2 U | 4.8 U | 6.2 U | 5.6 U | 4.6 U | 4.9 U | 6.2 U |
| 1,2-Dichlorobenzene | 5.2 U | 5.7 U | 4.6 U | 4.7 U | 5.3 U | 6.5 U | 5.7 U | 5.2 U | 4.8 U | 6.2 U | 5.6 UJ | 4.6 U | 4.9 U | 6.2 U |
| 1,3-Dichlorobenzene | 5.2 U | 5.7 U | 4.6 U | 4.7 U | 5.3 U | 6.5 U | 5.7 U | 5.2 U | 4.8 U | 6.2 U | 5.6 UJ | 4.6 U | 4.9 U | 6.2 U |
| 1,4-Dichlorobenzene | 5.2 U | 5.7 U | 4.6 U | 4.7 U | 5.3 U | 6.5 U | 5.7 U | 5.2 U | 4.8 U | 6.2 U | 5.6 UJ | 4.6 U | 4.9 U | 6.2 U |
| Dichlorodifluoromethane | 5.2 U | 5.7 U | 4.6 U | 4.7 U | 5.3 U | 6.5 U | 5.7 U | 5.2 U | 4.8 U | 6.2 U | 5.6 U | 4.6 U | 4.9 U | 6.2 U |
| 1,1-Dichloroethane | 5.2 U | 5.7 U | 4.6 U | 4.7 U | 5.3 U | 6.5 U | 5.7 U | 5.2 U | 4.8 U | 6.2 U | 5.6 U | 4.6 U | 4.9 U | 6.2 U |
| 1,2-Dichloroethane | 5.2 U | 5.7 U | 4.6 U | 4.7 U | 5.3 U | 6.5 U | 5.7 U | 5.2 U | 4.8 U | 6.2 U | 5.6 U | 4.6 U | 4.9 U | 6.2 U |
| cis-1,2-Dichloroethene | 5.2 U | 5.7 U | 4.6 U | 4.7 U | 3.5 J | 6.5 U | 36 | 5.2 U | 4.8 U | 6.2 U | 5.6 U | 4.6 U | 4.9 U | 6.2 U |
| trans-1,2-Dichloroethene | 5.2 U | 5.7 U | 4.6 U | 4.7 U | 5.3 U | 6.5 U | 5.7 U | 5.2 U | 4.8 U | 6.2 U | 5.6 U | 4.6 U | 4.9 U | 6.2 U |
| 1,1-Dichloroethene | 5.2 U | 5.7 U | 4.6 U | 4.7 U | 5.3 U | 6.5 U | 5.7 U | 5.2 U | 4.8 U | 6.2 U | 5.6 U | 4.6 U | 4.9 U | 6.2 U |
| 1,2-Dichloropropane | 5.2 UJ | 5.7 U | 4.6 U | 4.7 U | 5.3 U | 6.5 U | 5.7 U | 5.2 U | 4.8 U | 6.2 U | 5.6 U | 4.6 U | 4.9 U | 6.2 U |
| cis-1,3-Dichloropropene | 5.2 U | 5.7 U | 4.6 U | 4.7 U | 5.3 U | 6.5 U | 5.7 U | 5.2 U | 4.8 U | 6.2 U | 5.6 U | 4.6 U | 4.9 U | 6.2 U |
| trans-1,3-Dichloropropene | 5.2 U | 5.7 U | 4.6 U | 4.7 U | 5.3 U | 6.5 U | 5.7 U | 5.2 U | 4.8 U | 6.2 U | 5.6 U | 4.6 U | 4.9 U | 6.2 U |
| 1,4-Dioxane | 100 U | 110 U | 92 U | 94 U | 110 U | 130 U | 110 U | 100 U | 95 U | 120 U | 110 U | 91 U | 97 U | 120 U |
| Ethylbenzene | 5.2 U | 5.7 U | 4.6 U | 4.7 U | 5.3 U | 6.5 U | 5.7 U | 5.2 U | 4.8 U | 6.2 U | 5.6 U | 4.6 U | 4.9 U | 6.2 U |
| 2-Hexanone | 10 U | 11 U | 9.2 U | 9.4 U | 11 U | 13 U | 11 U | 10 U | 9.5 U | 12 U | 11 U | 9.1 U | 9.7 U | 12 U |
| Isopropylbenzene | 5.2 U | 5.7 U | 4.6 U | 4.7 U | 5.3 U | 6.5 U | 5.7 U | 5.2 U | 4.8 U | 6.2 U | 5.6 U | 4.6 U | 4.9 U | 6.2 U |
| Methyl acetate | 5.2 U | 5.7 U | 4.6 U | 4.7 U | 5.3 U | 6.5 U | 5.7 U | 5.2 U | 4.8 U | 6.2 U | 5.6 U | 4.6 U | 4.9 U | 6.2 U |
| Methylcyclohexane | 5.2 UJ | 5.7 U | 4.6 U | 4.7 U | 5.3 U | 6.5 U | 5.7 U | 5.2 U | 4.8 U | 6.2 U | 5.6 U | 4.6 U | 4.9 U | 6.2 U |
| Methylene chloride | 10 U | 11 U | 9.2 U | 9.4 U | 11 U | 13 U | 22 U | 5.2 U | 9.5 U | 6.2 U | 5.6 U | 4.6 U | 4.9 U | 6.2 U |
| 4-Methyl-2-pentanone | 10 U | 11 U | 9.2 U | 9.4 U | 11 U | 13 U | 11 U | 10 U | 9.5 U | 12 U | 11 U | 9.1 U | 9.7 U | 12 U |
| Methyl tert-butyl ether | 5.2 U | 5.7 U | 4.6 U | 4.7 U | 5.3 U | 6.5 U | 5.7 U | 5.2 U | 4.8 U | 6.2 U | 5.6 U | 4.6 U | 4.9 U | 6.2 U |
| Styrene | 5.2 U | 5.7 U | 4.6 U | 4.7 U | 5.3 U | 6.5 U | 5.7 U | 5.2 U | 4.8 U | 6.2 U | 5.6 U | 4.6 U | 4.9 U | 6.2 U |
| 1,1,2,2-Tetrachloroethane | 5.2 U | 5.7 U | 4.6 U | 4.7 U | 5.3 U | 6.5 U | 5.7 U | 5.2 U | 4.8 U | 6.2 U | 5.6 U | 4.6 U | 4.9 U | 6.2 U |
| Tetrachloroethene | 5.2 U | 5.7 U | 2.4 J | 110 | 1,800 | 1,500 | 2,000 | 13 | 4.8 U | 6.2 U | 5.6 U | 4.6 U | 4.9 U | 6.2 U |
| Toluene | 5.2 U | 5.7 U | 4.6 U | 4.7 U | 5.3 U | 6.5 U | 5.8 J | 5.2 U | 4.8 U | 6.2 U | 5.6 U | 4.6 U | 4.9 U | 6.2 U |
| 1,2,3-Trichlorobenzene | 5.2 U | 5.7 U | 4.6 U | 4.7 U | 5.3 U | 6.5 U | 5.7 U | 5.2 U | 4.8 U | 6.2 U | 5.6 UJ | 4.6 U | 4.9 U | 6.2 U |
| 1,2,4-Trichlorobenzene | 5.2 U | 5.7 U | 4.6 U | 4.7 U | 5.3 U | 6.5 U | 5.7 U | 5.2 U | 4.8 U | 6.2 U | 5.6 UJ | 4.6 U | 4.9 U | 6.2 U |
| 1,1,1-Trichloroethane | 5.2 U | 5.7 U | 4.6 U | 4.7 U | 5.3 U | 6.5 U | 5.7 U | 5.2 U | 4.8 U | 6.2 U | 5.6 U | 4.6 U | 4.9 U | 6.2 U |
| 1,1,2-Trichloroethane | 5.2 U | 5.7 U | 4.6 U | 4.7 U | 6.9 | 6.5 U | 2.3 J | 5.2 U | 4.8 U | 6.2 U | 5.6 U | 4.6 U | 4.9 U | 6.2 U |
| Trichloroethene | 5.2 U | 5.7 U | 4.6 U | 89 | 1,700 | 870 | 1,400 | 5.2 U | 4.8 U | 6.2 U | 5.6 U | 4.6 U | 4.9 U | 6.2 U |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 5.2 U | 5.7 U | 4.6 U | 4.7 U | 5.3 U | 6.5 U | 5.7 U | 5.2 U | 4.8 U | 6.2 U | 5.6 U | 4.6 U | 4.9 U | 6.2 U |
| Trichlorofluoromethane | 5.2 U | 5.7 U | 4.6 U | 4.7 U | 5.3 U | 6.5 U | 5.7 U | 5.2 U | 4.8 U | 6.2 U | 5.6 U | 4.6 U | 4.9 U | 6.2 U |
| Vinyl chloride | 5.2 U | 5.7 U | 4.6 U | 4.7 U | 5.3 U | 6.5 U | 5.7 U | 5.2 U | 4.8 U | 6.2 U | 5.6 U | 4.6 U | 4.9 U | 6.2 U |
| o-Xylene | 5.2 U | 5.7 U | 4.6 U | 4.7 U | 5.3 U | 6.5 U | 5.7 U | 5.2 U | 4.8 U | 6.2 U | 5.6 U | 4.6 U | 4.9 U | 6.2 U |
| m,p-Xylene | 5.2 U | 5.7 U | 4.6 U | 4.7 U | 5.3 U | 6.5 U | 5.7 U | 5.2 U | 4.8 U | 6.2 U | 5.6 U | 4.6 U | 4.9 U | 6.2 U |

**Notes:**

= Concentration exceeds U.S. Environmental Protection Agency (EPA) Regional Screening Levels (RSL) soil screening levels for protection of groundwater. Based on Ohio Environmental Protection Agency guidance dated August 21, 2009, regarding the use of EPA RSLs, RSLs based on non-cancer effects were adjusted by 1/10 (*i.e.* , RSL/10).

µg/kg = micrograms per kilogram
U = The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
B = Method blank contamination. The associated method blank contains the target analyte at a reportable level.
J = The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
UJ = The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the action limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
R = The data are unusable. (The compound may or may not be present.)

**TABLE 6**
**ANALYTICAL RESULTS FOR VOLATILE ORGANIC COMPOUNDS IN SOIL**
**EAST TROY CONTAMINATED AQUIFER**
**FEBRUARY 2013**

| Sample Location | SB007-SPN-01-0213 | SB007-SPN-04-0213 | SB007-SPN-06-0213 | SB008-SPN-01-0213 | SB008-SPN-04-0213 | SB008-SPN-06-0213 | SB009-SPN-05-0213 | SB009-SPN-05-0213-DU | SB009-SPN-07-0213 | SB009-SPN-09-0213 | SB010-SPN-05-0213 | SB010-SPN-07-0213 | SB010-SPN-07-0213-DUP | SB010-SPN-09-0213 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sample Number** | ESYT0 | E3YT1 | E3YT2RE | E3YT3 | E3YT4 | E3YT5RE | E3YW2 | E3YW4 | E3YW5 | E3YW6 | E3YT9 | E3YW0 | E3YW1 | E3YW3 |
| **Location Description** | Spinnaker parking lot | | | Spinnaker parking lot | | | NW corner of Spinnaker building | | | | NW corner of Spinnaker building | | | |
| **Depth (feet)** | 1' | 4' | 6' | 1' | 4' | 6' | 5' | 5' | 7' | 9' | 5' | 7' | 7' | 9' |
| **Sample Type (Grab/Composite)** | Grab | Grab | Grab | Grab | Grab | Grab | Grab | Grab | Grab | Grab | Grab | Grab | Grab | Grab |
| **Sample Date** | 2/13/2013 | 2/13/2013 | 2/13/2013 | 2/13/2013 | 2/13/2013 | 2/13/2013 | 2/14/2013 | 2/14/2013 | 2/14/2013 | 2/14/2013 | 2/14/2013 | 2/14/2013 | 2/14/2013 | 2/14/2013 |
| **Sample Time** | 1600 | 1605 | 1610 | 1645 | 1650 | 1655 | 1300 | 1300 | 1305 | 1310 | 1315 | 1320 | 1320 | 1325 |
| **LABORATORY PARAMETERS:** | | | | | | | | | | | | | | |
| **Volatile Organic Compounds (VOC) - µg/kg** | | | | | | | | | | | | | | |
| Acetone | 9.0 U | 8.5 U | 13 U | 11 U | 13 U | 13 R | 28 U | 15 U | 16 U | 16 U | 10 U | 20 U | 11 U | 17 U |
| Benzene | 4.5 U | 4.2 U | 6.5 U | 5.5 U | 6.3 U | 6.7 R | 7.0 U | 3.7 U | 3.9 U | 4.0 U | 5.1 U | 5.1 U | 5.7 U | 4.3 U |
| Bromochloromethane | 4.5 U | 4.2 U | 6.5 U | 5.5 U | 6.3 U | 6.7 R | 7.0 U | 3.7 U | 3.9 U | 4.0 U | 5.1 U | 5.1 U | 5.7 U | 4.3 U |
| Bromodichloromethane | 4.5 U | 4.2 U | 6.5 U | 5.5 U | 6.3 U | 6.7 R | 7.0 U | 3.7 U | 3.9 U | 4.0 U | 5.1 U | 5.1 U | 5.7 U | 4.3 U |
| Bromoform | 4.5 U | 4.2 U | 6.5 R | 5.5 U | 6.3 U | 6.7 R | 7.0 U | 3.7 U | 3.9 U | 4.0 U | 5.1 U | 5.1 U | 5.7 U | 4.3 U |
| Bromomethane | 4.5 U | 4.2 U | 6.5 U | 5.5 U | 6.3 U | 6.7 R | 7.0 UJ | 3.7 UJ | 3.9 UJ | 4.0 UJ | 5.1 UJ | 5.1 UJ | 5.7 UJ | 4.3 UJ |
| 2-Butanone | 9.0 U | 8.5 U | 13 U | 11 U | 13 U | 13 R | 14 U | 7.4 U | 7.8 U | 8.1 U | 10 U | 10 U | 11 U | 8.6 U |
| Carbon disulfide | 4.5 U | 4.2 U | 6.5 U | 5.5 U | 6.3 U | 6.7 R | 7.0 U | 3.7 U | 3.9 U | 4.0 U | 5.1 U | 5.1 U | 5.7 U | 4.3 U |
| Carbon tetrachloride | 4.5 U | 4.2 U | 6.5 U | 5.5 U | 6.3 U | 6.7 R | 7.0 U | 3.7 U | 3.9 U | 4.0 U | 5.1 U | 5.1 U | 5.7 U | 4.3 U |
| Chlorobenzene | 4.5 U | 4.2 UJ | 6.5 U | 5.5 U | 6.3 U | 6.7 R | 7.0 U | 3.7 U | 3.9 U | 4.0 U | 5.1 U | 5.1 U | 5.7 U | 4.3 U |
| Dibromochloromethane | 4.5 U | 4.2 U | 6.5 U | 5.5 U | 6.3 U | 6.7 R | 7.0 U | 3.7 U | 3.9 U | 4.0 U | 5.1 U | 5.1 U | 5.7 U | 4.3 U |
| Chloroethane | 4.5 U | 4.2 U | 6.5 U | 5.5 U | 6.3 U | 6.7 R | 7.0 U | 3.7 U | 3.9 U | 4.0 U | 5.1 U | 5.1 U | 5.7 U | 4.3 U |
| Chloroform | 4.5 U | 4.2 U | 6.5 U | 5.5 U | 6.3 U | 6.7 R | 7.0 U | 3.7 U | 3.9 U | 4.0 U | 5.1 U | 5.1 U | 5.7 U | 4.3 U |
| Chloromethane | 4.5 U | 4.2 U | 6.5 U | 5.5 U | 6.3 U | 6.7 R | 7.0 U | 3.7 U | 3.9 U | 4.0 U | 5.1 U | 5.1 U | 5.7 U | 4.3 U |
| Cyclohexane | 4.5 U | 4.2 U | 6.5 U | 5.5 U | 6.3 U | 6.7 R | 7.0 U | 3.7 U | 3.9 U | 4.0 U | 5.1 U | 5.1 U | 5.7 U | 4.3 U |
| 1,2-Dibromo-3-chloro-propane | 4.5 U | 4.2 U | 6.5 R | 5.5 U | 6.3 U | 6.7 R | 7.0 U | 3.7 U | 3.9 U | 4.0 U | 5.1 U | 5.1 U | 5.7 U | 4.3 U |
| 1,2-Dibromoethane | 4.5 U | 4.2 U | 6.5 U | 5.5 U | 6.3 U | 6.7 R | 7.0 U | 3.7 U | 3.9 U | 4.0 U | 5.1 U | 5.1 U | 5.7 U | 4.3 U |
| 1,2-Dichlorobenzene | 4.5 U | 4.2 UJ | 6.5 R | 5.5 U | 6.3 U | 6.7 R | 7.0 U | 3.7 U | 3.9 U | 4.0 U | 5.1 U | 5.1 U | 5.7 U | 4.3 U |
| 1,3-Dichlorobenzene | 4.5 U | 4.2 UJ | 6.5 R | 5.5 U | 6.3 U | 6.7 R | 7.0 U | 3.7 U | 3.9 U | 4.0 U | 5.1 U | 5.1 U | 5.7 U | 4.3 U |
| 1,4-Dichlorobenzene | 4.5 U | 4.2 UJ | 6.5 R | 5.5 U | 6.3 U | 6.7 R | 7.0 U | 3.7 U | 3.9 U | 4.0 U | 5.1 U | 5.1 U | 5.7 U | 4.3 U |
| Dichlorodifluoromethane | 4.5 U | 4.2 U | 6.5 U | 5.5 U | 6.3 U | 6.7 R | 7.0 U | 3.7 U | 3.9 U | 4.0 U | 5.1 U | 5.1 U | 5.7 U | 4.3 U |
| 1,1-Dichloroethane | 4.5 U | 4.2 U | 6.5 U | 5.5 U | 6.3 U | 6.7 R | 7.0 U | 3.7 U | 3.9 U | 4.0 U | 5.1 U | 5.1 U | 5.7 U | 4.3 U |
| 1,2-Dichloroethane | 4.5 U | 4.2 U | 6.5 U | 5.5 U | 6.3 U | 6.7 R | 7.0 U | 3.7 U | 3.9 U | 4.0 U | 5.1 U | 5.1 U | 5.7 U | 4.3 U |
| cis-1,2-Dichloroethene | 4.5 U | 4.2 U | 6.5 U | 5.5 U | 6.3 U | 6.7 R | 7.0 U | 3.7 U | 3.9 U | 4.0 U | 5.1 U | 5.1 U | 5.7 U | 4.3 U |
| trans-1,2-Dichloroethene | 4.5 U | 4.2 U | 6.5 U | 5.5 U | 6.3 U | 6.7 R | 7.0 U | 3.7 U | 3.9 U | 4.0 U | 5.1 U | 5.1 U | 5.7 U | 4.3 U |
| 1,1-Dichloroethene | 4.5 U | 4.2 UJ | 6.5 UJ | 5.5 UJ | 6.3 UJ | 6.7 R | 7.0 U | 3.7 U | 3.9 U | 4.0 U | 5.1 U | 5.1 U | 5.7 U | 4.3 U |
| 1,2-Dichloropropane | 4.5 U | 4.2 U | 6.5 U | 5.5 U | 6.3 U | 6.7 R | 7.0 U | 3.7 U | 3.9 U | 4.0 U | 5.1 U | 5.1 U | 5.7 U | 4.3 U |
| cis-1,3-Dichloropropene | 4.5 U | 4.2 U | 6.5 U | 5.5 U | 6.3 U | 6.7 R | 7.0 U | 3.7 UJ | 3.9 U | 4.0 U | 5.1 U | 5.1 U | 5.7 U | 4.3 U |
| trans-1,3-Dichloropropene | 4.5 U | 4.2 U | 6.5 U | 5.5 U | 6.3 U | 6.7 R | 7.0 U | 3.7 UJ | 3.9 U | 4.0 U | 5.1 U | 5.1 U | 5.7 U | 4.3 U |
| 1,4-Dioxane | 90 U | 85 U | 130 U | 110 U | 130 U | 130 R | 140 U | 74 UJ | 78 U | 81 U | 100 U | 100 U | 110 R | 86 U |
| Ethylbenzene | 4.5 U | 4.2 U | 6.5 U | 5.5 U | 6.3 U | 6.7 R | 7.0 U | 3.7 U | 3.9 U | 4.0 U | 5.1 U | 5.1 U | 5.7 U | 4.3 U |
| 2-Hexanone | 9.0 U | 8.5 U | 13 U | 11 U | 13 U | 13 R | 14 U | 7.4 U | 7.8 U | 8.1 U | 10 U | 10 U | 11 U | 8.6 U |
| Isopropylbenzene | 4.5 U | 4.2 U | 6.5 U | 5.5 U | 6.3 U | 6.7 R | 7.0 U | 3.7 U | 3.9 U | 4.0 U | 5.1 U | 5.1 U | 5.7 U | 4.3 U |
| Methyl acetate | 4.5 U | 4.2 U | 6.5 U | 5.5 U | 6.3 U | 6.7 R | 7.0 U | 3.7 U | 3.9 U | 4.0 U | 5.1 U | 5.1 U | 5.7 U | 4.3 U |
| Methylcyclohexane | 4.5 U | 4.2 U | 6.5 U | 5.5 U | 6.3 U | 6.7 R | 7.0 U | 3.7 U | 3.9 U | 4.0 U | 5.1 U | 5.1 U | 5.7 U | 4.3 U |
| Methylene chloride | 4.5 U | 4.2 U | 6.5 U | 5.5 U | 6.3 U | 6.7 R | 7.0 U | 3.7 U | 3.9 U | 4.0 U | 5.1 U | 10 U | 11 U | 8.6 U |
| 4-Methyl-2-pentanone | 9.0 U | 8.5 U | 13 U | 11 U | 13 U | 13 R | 14 U | 7.4 U | 7.8 U | 8.1 U | 10 U | 10 U | 11 U | 8.6 U |
| Methyl tert-butyl ether | 4.5 U | 4.2 U | 6.5 U | 5.5 U | 6.3 U | 6.7 R | 7.0 U | 3.7 U | 3.9 U | 4.0 U | 5.1 U | 5.1 U | 5.7 U | 4.3 U |
| Styrene | 4.5 U | 4.2 U | 6.5 U | 5.5 U | 6.3 U | 6.7 R | 7.0 U | 3.7 U | 3.9 U | 4.0 U | 5.1 U | 5.1 U | 5.7 U | 4.3 U |
| 1,1,2,2-Tetrachloroethane | 4.5 U | 4.2 U | 6.5 U | 5.5 U | 6.3 U | 6.7 R | 7.0 U | 3.7 U | 3.9 U | 4.0 U | 5.1 U | 5.1 U | 5.7 U | 4.3 U |
| Tetrachloroethene | 4.5 U | 4.2 U | 6.5 U | 5.5 U | 6.3 U | 6.7 R | 7.0 U | 3.7 U | 3.9 U | 4.0 U | 3.2 J | 5.1 U | 2.4 J | 4.3 U |
| Toluene | 4.5 U | 4.2 U | 6.5 U | 5.5 U | 6.3 U | 6.7 R | 7.0 U | 3.7 U | 3.9 U | 4.0 U | 5.1 U | 5.1 U | 5.7 U | 4.3 U |
| 1,2,3-Trichlorobenzene | 4.5 U | 4.2 UJ | 6.5 R | 5.5 U | 6.3 U | 6.7 R | 7.0 U | 3.7 UJ | 3.9 U | 4.0 U | 5.1 U | 5.1 U | 5.7 U | 4.3 U |
| 1,2,4-Trichlorobenzene | 4.5 U | 4.2 UJ | 6.5 R | 5.5 U | 6.3 U | 6.7 R | 7.0 U | 3.7 U | 3.9 U | 4.0 U | 5.1 U | 5.1 U | 5.7 U | 4.3 U |
| 1,1,1-Trichloroethane | 4.5 U | 4.2 U | 6.5 U | 5.5 U | 6.3 U | 6.7 R | 9.4 | 3.5 J | 7.8 | 11 | 16 | 5.1 U | 7.1 | 2.3 J |
| 1,1,2-Trichloroethane | 4.5 U | 4.2 U | 6.5 U | 5.5 U | 6.3 U | 6.7 R | 7.0 U | 3.7 UJ | 3.9 U | 4.0 U | 5.1 U | 5.1 U | 5.7 U | 4.3 U |
| Trichloroethene | 4.5 U | 4.7 | 20 | 19 | 21 | 16 J | 50 | 34 | 14 | 12 | 180 | 16 | 61 | 18 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 4.5 U | 4.2 U | 6.5 U | 5.5 U | 6.3 U | 6.7 R | 7.0 U | 3.7 U | 3.9 U | 4.0 U | 5.1 U | 5.1 U | 5.7 U | 4.3 U |
| Trichlorofluoromethane | 4.5 U | 4.2 U | 6.5 U | 5.5 U | 6.3 U | 6.7 R | 7.0 U | 3.7 U | 3.9 U | 4.0 U | 5.1 U | 5.1 U | 5.7 U | 4.3 U |
| Vinyl chloride | 4.5 U | 4.2 U | 6.5 U | 5.5 U | 6.3 U | 6.7 R | 7.0 U | 3.7 U | 3.9 U | 4.0 U | 5.1 U | 5.1 U | 5.7 UJ | 4.3 U |
| o-Xylene | 4.5 U | 4.2 U | 6.5 U | 5.5 U | 6.3 U | 6.7 R | 7.0 U | 3.7 UJ | 3.9 U | 4.0 U | 5.1 U | 5.1 U | 5.7 U | 4.3 U |
| m,p-Xylene | 4.5 U | 4.2 U | 6.5 U | 5.5 U | 6.3 U | 6.7 R | 7.0 U | 3.7 U | 3.9 U | 4.0 U | 5.1 U | 5.1 U | 5.7 U | 4.3 U |

**Notes:**

= Concentration exceeds U.S. Environmental Protection Agency (EPA) Regional Screening Levels (RSL) soil screening levels for protection of groundwater. Based on Ohio Environmental Protection Agency guidance dated August 21, 2009, regarding the use of EPA RSLs, RSLs based on non-cancer effects were adjusted by 1/10 (i.e., RSL/10).

µg/kg = micrograms per kilogram
U = The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
B = Method blank contamination. The associated method blank contains the target analyte at a reportable level.
J = The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
UJ = The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the action limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
R = The data are unusable. (The compound may or may not be present.)

**TABLE 6**
**ANALYTICAL RESULTS FOR VOLATILE ORGANIC COMPOUNDS IN SOIL**
**EAST TROY CONTAMINATED AQUIFER**
**FEBRUARY 2013**

| Sample Location | SB011-SPN-05-0213 | SB011-SPN-07-0213 | SB011-SPN-09-0213 | SB012-SPN-05-0213 | SB012-SPN-07-0213 | SB012-SPN-09-0213 | SB013-SPN-05-0213 | SB014-SPN-01-0213 | SB014-SPN-04-0213 | SB014-SPN-06-0213 | SB014-SPN-06-0213-DUP |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Number | E3YT6 | E3YT7 | E3YT8 | E3YX0 | E3YX5 | E3YX1 | E3YX7 | E3YW7 | E3YW8/E3YW8DL | E3YX4 | E3YX2 |
| Location Description | NW corner of Spinnaker building | | | NW corner of Spinnaker building | | | NW corner of Spinnaker building | W side of main Spinnaker parking lot | | | |
| Depth (feet) | 5' | 7' | 9' | 5' | 7' | 9' | 5' | 1' | 4' | 6' | 6' |
| Sample Type (Grab/Composite) | Grab | Grab | Grab | Grab | Grab | Grab | Grab | Grab | Grab | Grab | Grab |
| Sample Date | 2/14/2013 | 2/14/2013 | 2/14/2013 | 2/14/2013 | 2/14/2013 | 2/14/2013 | 2/14/2013 | 2/14/2013 | 2/14/2013 | 2/14/2013 | 2/14/2013 |
| Sample Time | 1340 | 1345 | 1345 | 1445 | 1450 | 1455 | 1505 | 1525 | 1525 | 1525 | 1525 |
| **LABORATORY PARAMETERS:** | | | | | | | | | | | |
| **Volatile Organic Compounds (VOC) - µg/kg** | | | | | | | | | | | |
| Acetone | 8.2 U | 18 U | 20 U | 18 U | 9.1 U | 16 U | 9.0 U | 11 U | 12 U | 11 U | 9.2 U |
| Benzene | 4.1 U | 4.6 U | 5.1 U | 4.5 U | 4.5 U | 3.9 U | 4.5 U | 5.6 U | 6.1 U | 5.4 U | 4.6 U |
| Bromochloromethane | 4.1 U | 4.6 U | 5.1 U | 4.5 U | 4.5 U | 3.9 U | 4.5 U | 5.6 U | 6.1 U | 5.4 U | 4.6 U |
| Bromodichloromethane | 4.1 U | 4.6 U | 5.1 U | 4.5 U | 4.5 U | 3.9 U | 4.5 U | 5.6 U | 6.1 U | 5.4 U | 4.6 U |
| Bromoform | 4.1 U | 4.6 U | 5.1 U | 4.5 U | 4.5 U | 3.9 U | 4.5 U | 5.6 U | 6.1 U | 5.4 U | 4.6 U |
| Bromomethane | 4.1 UJ | 4.6 UJ | 5.1 UJ | 4.5 U | 4.5 U | 3.9 U | 4.5 U | 5.6 U | 6.1 U | 5.4 U | 4.6 U |
| 2-Butanone | 8.2 U | 9.1 U | 10 U | 8.9 U | 9.1 U | 7.7 U | 9.0 U | 11 U | 12 U | 11 U | 9.2 U |
| Carbon disulfide | 4.1 U | 4.6 U | 5.1 U | 4.5 U | 4.5 U | 3.9 U | 4.5 U | 5.6 U | 6.1 U | 5.4 U | 4.6 U |
| Carbon tetrachloride | 4.1 U | 4.6 U | 5.1 U | 4.5 U | 4.5 U | 3.9 U | 4.5 U | 5.6 U | 6.1 U | 5.4 U | 4.6 U |
| Chlorobenzene | 4.1 U | 4.6 U | 5.1 U | 4.5 U | 4.5 U | 3.9 U | 4.5 UJ | 5.6 U | 6.1 U | 5.4 U | 4.6 U |
| Dibromochloromethane | 4.1 U | 4.6 U | 5.1 U | 4.5 U | 4.5 U | 3.9 U | 4.5 U | 5.6 U | 6.1 U | 5.4 U | 4.6 U |
| Chloroethane | 4.1 U | 4.6 U | 5.1 U | 4.5 U | 4.5 U | 3.9 U | 4.5 U | 5.6 U | 6.1 U | 5.4 U | 4.6 U |
| Chloroform | 4.1 U | 4.6 U | 5.1 U | 4.5 U | 4.5 U | 3.9 U | 4.5 U | 5.6 U | 6.1 U | 7.1 | 4.6 U |
| Chloromethane | 4.1 U | 4.6 U | 5.1 U | 4.5 U | 4.5 U | 3.9 U | 4.5 U | 5.6 U | 6.1 U | 5.4 U | 4.6 U |
| Cyclohexane | 4.1 U | 4.6 U | 5.1 U | 4.5 U | 4.5 U | 3.9 U | 4.5 U | 5.6 U | 6.1 U | 5.4 U | 4.6 U |
| 1,2-Dibromo-3-chloro-propane | 4.1 U | 4.6 U | 5.1 U | 4.5 U | 4.5 U | 3.9 U | 4.5 U | 5.6 U | 6.1 U | 5.4 U | 4.6 U |
| 1,2-Dibromoethane | 4.1 U | 4.6 U | 5.1 U | 4.5 U | 4.5 U | 3.9 U | 4.5 U | 5.6 U | 6.1 U | 5.4 U | 4.6 U |
| 1,2-Dichlorobenzene | 4.1 U | 4.6 U | 5.1 U | 4.5 U | 4.5 U | 3.9 U | 4.5 UJ | 5.6 U | 6.1 U | 5.4 U | 4.6 U |
| 1,3-Dichlorobenzene | 4.1 U | 4.6 U | 5.1 U | 4.5 U | 4.5 U | 3.9 U | 4.5 UJ | 5.6 U | 6.1 U | 5.4 U | 4.6 U |
| 1,4-Dichlorobenzene | 4.1 U | 4.6 U | 5.1 U | 4.5 U | 4.5 U | 3.9 U | 4.5 UJ | 5.6 U | 6.1 U | 5.4 U | 4.6 U |
| Dichlorodifluoromethane | 4.1 U | 4.6 U | 5.1 U | 4.5 U | 4.5 U | 3.9 U | 4.5 U | 5.6 U | 6.1 U | 5.4 U | 4.6 U |
| 1,1-Dichloroethane | 4.1 U | 4.6 U | 5.1 U | 4.5 U | 4.5 U | 3.6 J | 4.5 U | 5.6 U | 6.1 U | 5.4 U | 4.6 U |
| 1,2-Dichloroethane | 4.1 U | 4.6 U | 5.1 U | 4.5 U | 4.5 U | 3.9 U | 4.5 U | 5.6 U | 6.1 U | 5.4 U | 4.6 U |
| cis-1,2-Dichloroethene | 4.1 U | 4.6 U | 9.5 | 4.5 U | 4.5 U | 3.9 U | 4.5 U | 5.6 U | 2.3 J | 5.4 U | 4.6 U |
| trans-1,2-Dichloroethene | 4.1 U | 4.6 U | 5.1 U | 4.5 U | 4.5 U | 3.9 U | 4.5 U | 5.6 U | 6.1 U | 5.4 U | 4.6 U |
| 1,1-Dichloroethene | 4.1 U | 4.6 U | 5.1 U | 4.5 U | 4.5 U | 3.9 U | 4.5 U | 5.6 U | 6.1 U | 5.4 U | 4.6 U |
| 1,2-Dichloropropane | 4.1 U | 4.6 U | 5.1 U | 4.5 U | 4.5 U | 3.9 U | 4.5 U | 5.6 U | 6.1 U | 5.4 U | 4.6 U |
| cis-1,3-Dichloropropene | 4.1 U | 4.6 U | 5.1 U | 4.5 U | 4.5 U | 3.9 UJ | 4.5 U | 5.6 U | 6.1 U | 5.4 U | 4.6 U |
| trans-1,3-Dichloropropene | 4.1 U | 4.6 U | 5.1 U | 4.5 U | 4.5 U | 3.9 UJ | 4.5 U | 5.6 U | 6.1 U | 5.4 U | 4.6 U |
| 1,4-Dioxane | 82 U | 91 UJ | 100 UJ | 89 U | 91 U | 77 U | 90 U | 110 U | 120 U | 110 U | 92 U |
| Ethylbenzene | 4.1 U | 4.6 U | 5.1 U | 4.5 U | 4.5 U | 3.9 U | 4.5 U | 5.6 U | 6.1 U | 5.4 U | 4.6 U |
| 2-Hexanone | 8.2 U | 9.1 U | 10 U | 8.9 U | 9.1 U | 7.7 U | 9.0 U | 11 U | 12 U | 11 U | 9.2 U |
| Isopropylbenzene | 4.1 U | 4.6 U | 5.1 U | 4.5 U | 4.5 U | 3.9 U | 4.5 U | 5.6 U | 6.1 U | 5.4 U | 4.6 U |
| Methyl acetate | 4.1 U | 4.6 U | 5.1 U | 4.5 U | 4.5 U | 3.9 U | 4.5 U | 5.6 U | 6.1 U | 5.4 U | 4.6 U |
| Methylcyclohexane | 4.1 U | 4.6 U | 5.1 U | 4.5 U | 4.5 U | 3.9 U | 4.5 U | 5.6 U | 6.1 U | 5.4 U | 4.6 U |
| Methylene chloride | 4.1 U | 4.6 U | 5.1 U | 4.5 U | 4.5 U | 3.9 U | 4.5 U | 11 U | 6.1 U | 5.4 U | 9.2 U |
| 4-Methyl-2-pentanone | 8.2 U | 9.1 U | 10 U | 8.9 U | 9.1 U | 7.7 U | 9.0 U | 11 U | 12 U | 11 U | 9.2 U |
| Methyl tert-butyl ether | 4.1 U | 4.6 U | 5.1 U | 4.5 U | 4.5 U | 3.9 U | 4.5 U | 5.6 U | 6.1 U | 5.4 U | 4.6 U |
| Styrene | 4.1 U | 4.6 U | 5.1 U | 4.5 U | 4.5 U | 3.9 U | 4.5 U | 5.6 U | 6.1 U | 5.4 U | 4.6 U |
| 1,1,2,2-Tetrachloroethane | 4.1 U | 4.6 U | 5.1 U | 4.5 U | 4.5 U | 3.9 U | 4.5 U | 5.6 U | 6.1 U | 5.4 U | 4.6 U |
| Tetrachloroethene | 2.4 J | 4.6 U | 5.1 U | 4.5 U | 4.5 U | 3.9 U | 4.5 U | 2.7 J | 11 | 5.4 U | 1.9 J |
| Toluene | 4.1 U | 4.6 U | 5.1 U | 4.5 U | 4.5 U | 3.9 U | 4.5 U | 5.6 U | 6.1 U | 5.4 U | 4.6 U |
| 1,2,3-Trichlorobenzene | 4.1 U | 4.6 U | 5.1 U | 4.5 UJ | 4.5 UJ | 3.9 UJ | 4.5 UJ | 5.6 U | 6.1 UJ | 5.4 UJ | 4.6 UJ |
| 1,2,4-Trichlorobenzene | 4.1 U | 4.6 U | 5.1 U | 4.5 U | 4.5 U | 3.9 U | 4.5 UJ | 5.6 U | 6.1 U | 5.4 U | 4.6 U |
| 1,1,1-Trichloroethane | 2.1 J | 4.6 U | 5.1 U | 6.5 | 9.1 | 3.1 J | 6.8 | 5.6 U | 6.1 U | 5.4 U | 4.6 U |
| 1,1,2-Trichloroethane | 4.1 U | 4.6 U | 5.1 U | 4.5 U | 4.5 U | 3.9 UJ | 4.5 U | 5.6 U | 6.1 U | 5.4 U | 4.6 U |
| Trichloroethene | 56 | 45 | 63 | 71 | 50 | 88 | 100 | 3.8 J | 1,200 | 14 | 17 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 4.1 U | 4.6 U | 5.1 U | 4.5 U | 4.5 U | 3.9 U | 4.5 U | 5.6 U | 6.1 U | 5.4 U | 4.6 U |
| Trichlorofluoromethane | 4.1 U | 4.6 U | 5.1 U | 4.5 U | 4.5 U | 3.9 U | 4.5 U | 5.6 U | 6.1 U | 5.4 U | 4.6 U |
| Vinyl chloride | 4.1 U | 4.6 U | 5.1 U | 4.5 U | 4.5 U | 3.9 U | 4.5 U | 5.6 U | 6.1 U | 5.4 U | 4.6 U |
| o-Xylene | 4.1 U | 4.6 U | 5.1 U | 4.5 UJ | 4.5 UJ | 3.9 UJ | 4.5 U | 5.6 U | 6.1 UJ | 5.4 UJ | 4.6 UJ |
| m,p-Xylene | 4.1 U | 4.6 U | 5.1 U | 4.5 U | 4.5 U | 3.9 U | 4.5 U | 5.6 U | 6.1 U | 5.4 U | 4.6 U |

**Notes:**

= Concentration exceeds U.S. Environmental Protection Agency (EPA) Regional Screening Levels (RSL) soil screening levels for protection of groundwater. Based on Ohio Environmental Protection Agency guidance dated August 21, 2009, regarding the use of EPA RSLs, RSLs based on non-cancer effects were adjusted by 1/10 (i.e., RSL/10).

µg/kg = micrograms per kilogram
U = The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
B = Method blank contamination. The associated method blank contains the target analyte at a reportable level.
J = The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
UJ = The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the action limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
R = The data are unusable. (The compound may or may not be present.)

**TABLE 6**
**ANALYTICAL RESULTS FOR VOLATILE ORGANIC COMPOUNDS IN SOIL**
**EAST TROY CONTAMINATED AQUIFER**
**FEBRUARY 2013**

| Sample Location | SB015-SPN-01-0213 | SB015-SPN-04-0213 | SB015-SPN-04-0213-DUP | SB015-SPN-06-0213 | SB016-WAT-01-0213 | SB017-WAT-01-0213 | SB017-WAT-01-0213-DUP | SB018-WAT-01-0213 |
|---|---|---|---|---|---|---|---|---|
| Sample Number | E3YX8 | E3YW9 | E3YX3 | E3YY2 | E3YY1 | E3YX6 | E3YX9 | E3YY0 |
| Location Description | W side of main Spinnaker parking lot | | | | W side of backyard of 405 Water St | E side of backyard of 405 Water St | | Backyard of 413 Water St |
| Depth (feet) | 1' | 4' | 4' | 6' | Surface | Surface | Surface | Surface |
| Sample Type (Grab/Composite) | Grab | Grab | Grab | Grab | Grab | Grab | Grab | Grab |
| Sample Date | 2/14/2013 | 2/14/2013 | 2/14/2013 | 2/14/2013 | 2/14/2013 | 2/14/2013 | 2/14/2013 | 2/14/2013 |
| Sample Time | 1550 | 1555 | 1555 | 1600 | 1640 | 1645 | 1645 | 1650 |
| **LABORATORY PARAMETERS:** | | | | | | | | |
| **Volatile Organic Compounds (VOC) - µg/kg** | | | | | | | | |
| Acetone | 46 | 9.1 U | 10 U | 12 U | 23 | 21 | 17 | 19 |
| Benzene | 3.3 U | 4.5 U | 5.0 U | 6.2 U | 7.6 U | 7.8 U | 7.7 U | 6.4 U |
| Bromochloromethane | 3.3 U | 4.5 U | 5.0 U | 6.2 U | 7.6 U | 7.8 U | 7.7 U | 6.4 U |
| Bromodichloromethane | 3.3 U | 4.5 U | 5.0 U | 6.2 U | 7.6 U | 7.8 U | 7.7 U | 6.4 U |
| Bromoform | 3.3 U | 4.5 U | 5.0 U | 6.2 U | 7.6 U | 7.8 U | 7.7 U | 6.4 U |
| Bromomethane | 3.3 U | 4.5 U | 5.0 U | 6.2 U | 7.6 U | 7.8 U | 7.7 U | 6.4 U |
| 2-Butanone | 6.7 U | 9.1 U | 10 U | 12 U | 15 U | 16 U | 15 U | 13 U |
| Carbon disulfide | 3.3 U | 4.5 U | 5.0 U | 6.2 U | 7.6 U | 7.8 U | 7.7 U | 6.4 U |
| Carbon tetrachloride | 3.3 U | 4.5 U | 5.0 U | 6.2 U | 7.6 U | 7.8 U | 7.7 U | 6.4 U |
| Chlorobenzene | 3.3 UJ | 4.5 U | 5.0 U | 6.2 U | 7.6 UJ | 7.8 U | 7.7 UJ | 6.4 UJ |
| Dibromochloromethane | 3.3 U | 4.5 U | 5.0 U | 6.2 U | 7.6 U | 7.8 U | 7.7 U | 6.4 U |
| Chloroethane | 3.3 U | 4.5 U | 5.0 U | 6.2 U | 7.6 U | 7.8 U | 7.7 U | 6.4 U |
| Chloroform | 3.3 U | 4.5 U | 5.0 U | 6.2 U | 7.6 U | 7.8 U | 7.7 U | 6.4 U |
| Chloromethane | 3.3 U | 4.5 U | 5.0 U | 6.2 U | 7.6 U | 7.8 U | 7.7 U | 6.4 U |
| Cyclohexane | 3.3 U | 4.5 U | 5.0 U | 6.2 U | 7.6 U | 7.8 U | 7.7 U | 6.4 U |
| 1,2-Dibromo-3-chloro-propane | 3.3 U | 4.5 U | 5.0 U | 6.2 U | 7.6 U | 7.8 U | 7.7 U | 6.4 U |
| 1,2-Dibromoethane | 3.3 U | 4.5 U | 5.0 U | 6.2 U | 7.6 U | 7.8 U | 7.7 U | 6.4 U |
| 1,2-Dichlorobenzene | 3.3 UJ | 4.5 U | 5.0 U | 6.2 U | 7.6 UJ | 7.8 U | 7.7 UJ | 6.4 UJ |
| 1,3-Dichlorobenzene | 3.3 UJ | 4.5 U | 5.0 U | 6.2 U | 7.6 UJ | 7.8 U | 7.7 UJ | 6.4 UJ |
| 1,4-Dichlorobenzene | 3.3 UJ | 4.5 U | 5.0 U | 6.2 U | 7.6 UJ | 7.8 U | 7.7 UJ | 6.4 UJ |
| Dichlorodifluoromethane | 3.3 U | 4.5 U | 5.0 U | 6.2 U | 7.6 U | 7.8 U | 7.7 U | 6.4 U |
| 1,1-Dichloroethane | 3.3 U | 4.5 U | 5.0 U | 6.2 U | 7.6 U | 7.8 U | 7.7 U | 6.4 U |
| 1,2-Dichloroethane | 3.3 U | 4.5 U | 5.0 U | 6.2 U | 7.6 U | 7.8 U | 7.7 U | 6.4 U |
| cis-1,2-Dichloroethene | 5.3 | 4.5 U | 180 | 6.2 U | 7.6 U | 7.8 U | 7.7 U | 6.4 U |
| trans-1,2-Dichloroethene | 3.3 U | 4.5 U | 12 | 6.2 U | 7.6 U | 7.8 U | 7.7 U | 6.4 U |
| 1,1-Dichloroethene | 3.3 U | 4.5 U | 5.0 U | 6.2 U | 7.6 U | 7.8 U | 7.7 U | 6.4 U |
| 1,2-Dichloropropane | 3.3 U | 4.5 U | 5.0 U | 6.2 U | 7.6 U | 7.8 U | 7.7 U | 6.4 U |
| cis-1,3-Dichloropropene | 3.3 U | 4.5 U | 5.0 U | 6.2 U | 7.6 U | 7.8 U | 7.7 U | 6.4 U |
| trans-1,3-Dichloropropene | 3.3 U | 4.5 U | 5.0 U | 6.2 U | 7.6 U | 7.8 U | 7.7 U | 6.4 U |
| 1,4-Dioxane | 67 U | 91 U | 100 U | 120 U | 150 U | 160 U | 150 U | 130 U |
| Ethylbenzene | 3.3 U | 4.5 U | 5.0 U | 6.2 U | 7.6 U | 7.8 U | 7.7 U | 6.4 U |
| 2-Hexanone | 6.7 U | 9.1 U | 10 U | 12 U | 15 U | 16 U | 15 U | 13 U |
| Isopropylbenzene | 3.3 U | 4.5 U | 5.0 U | 6.2 U | 7.6 U | 7.8 U | 7.7 U | 6.4 U |
| Methyl acetate | 3.3 U | 4.5 U | 5.0 U | 6.2 U | 7.9 | 4.7 J | 7.7 U | 4.5 J |
| Methylcyclohexane | 3.3 U | 4.5 U | 5.0 U | 6.2 U | 7.6 U | 7.8 U | 7.7 U | 6.4 U |
| Methylene chloride | 3.3 U | 9.1 U | 5.0 U | 6.2 U | 7.6 U | 7.8 U | 7.7 U | 6.4 U |
| 4-Methyl-2-pentanone | 6.7 U | 9.1 U | 10 U | 12 U | 15 U | 16 U | 15 U | 13 U |
| Methyl tert-butyl ether | 3.3 U | 4.5 U | 5.0 U | 6.2 U | 7.6 U | 7.8 U | 7.7 U | 6.4 U |
| Styrene | 3.3 U | 4.5 U | 5.0 U | 6.2 U | 7.6 U | 7.8 U | 7.7 U | 6.4 U |
| 1,1,2,2-Tetrachloroethane | 3.3 U | 4.5 U | 5.0 U | 6.2 U | 7.6 U | 7.8 U | 7.7 U | 6.4 U |
| Tetrachloroethene | 3.3 U | 6.0 | 5.0 U | 6.2 U | 7.6 U | 7.8 U | 7.7 U | 6.4 U |
| Toluene | 3.3 U | 4.5 U | 5.0 U | 6.2 U | 7.6 U | 7.8 U | 7.7 U | 6.4 U |
| 1,2,3-Trichlorobenzene | 3.3 UJ | 4.5 U | 5.0 UJ | 6.2 U | 7.6 UJ | 7.8 U | 7.7 UJ | 6.4 UJ |
| 1,2,4-Trichlorobenzene | 3.3 UJ | 4.5 U | 5.0 U | 6.2 U | 7.6 UJ | 7.8 U | 7.7 UJ | 6.4 UJ |
| 1,1,1-Trichloroethane | 3.3 U | 4.5 U | 5.0 U | 6.2 U | 7.6 U | 7.8 U | 7.7 U | 6.4 U |
| 1,1,2-Trichloroethane | 3.3 U | 4.5 U | 5.0 U | 6.2 U | 7.6 U | 7.8 U | 7.7 U | 6.4 U |
| Trichloroethene | 3.3 U | 4.5 U | 17 | 3.5 J | 7.6 U | 7.8 U | 7.7 U | 6.4 U |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 3.3 U | 4.5 U | 5.0 U | 6.2 U | 7.6 U | 7.8 U | 7.7 U | 6.4 U |
| Trichlorofluoromethane | 3.3 U | 4.5 U | 5.0 U | 6.2 U | 7.6 U | 7.8 U | 7.7 U | 6.4 U |
| Vinyl chloride | 3.3 U | 4.5 U | 5.0 U | 6.2 U | 7.6 U | 7.8 U | 7.7 U | 6.4 U |
| o-Xylene | 3.3 U | 4.5 U | 5.0 UJ | 6.2 U | 7.6 U | 7.8 U | 7.7 U | 6.4 U |
| m,p-Xylene | 3.3 U | 4.5 U | 5.0 U | 6.2 U | 7.6 U | 7.8 U | 7.7 U | 6.4 U |

**Notes:**

= Concentration exceeds U.S. Environmental Protection Agency (EPA) Regional Screening Levels (RSL) soil screening levels for protection of groundwater.
Based on Ohio Environmental Protection Agency guidance dated August 21, 2009, regarding the use of EPA RSLs, RSLs based on non-cancer effects were adjusted by 1/10 (i.e., RSL/10).

µg/kg = micrograms per kilogram
U = The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
B = Method blank contamination. The associated method blank contains the target analyte at a reportable level.
J = The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
UJ = The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the action limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
R = The data are unusable. (The compound may or may not be present.)